P415 'Facilitating Access to Wholesale Markets for Flexibility Dispatched by VLPs'

P415 seeks to amend the BSC to allow Virtual Lead Parties (VLPs) to participate in the GB wholesale market.

This Report Phase Consultation for P415 closes:

5pm on **Monday 17 May 2023**

The Panel may not be able to consider late responses.

The BSC Panel initially recommends **approval** of the P415 Alternative Modification and **rejection** of the P415 Proposed Modification

The BSC Panel **does** believe P415 impacts the European Electricity Balancing Guideline (EBGL) Article 18 terms and conditions held within the BSC

This Modification is expected to impact:

- Suppliers; and
- Virtual Lead Parties (VLPs).

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Phase

Initial Written Assessment

Definition Procedure

Assessment Procedure

Report Phase

Implementation

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About This Document

This is the P415 Draft Modification Report, which Elexon is issuing for industry consultation on the BSC Panel's behalf. It contains the Panel's provisional recommendations on P415. The Panel will consider all consultation responses at its meeting on 8 June 2023, when it will agree a final recommendation to the Authority on whether or not the change should be made.

There are six parts to this document:

- This is the main document. It provides details of the solution, impacts, costs, benefits/drawbacks and proposed implementation approach. It also summarises the Workgroup's key views on the areas set by the Panel, and contains details of the Workgroup's membership and full Terms of Reference.
- Attachment A contains the draft redlined changes to the BSC for the P415 Proposed and Alternative Solutions
- Attachment B contains the Solution Summary and Business Requirements
- Attachment C contains the final P415 Cost Benefit Analysis (CBA) Report
- Attachment D contains the full responses received to the Workgroup's Assessment Procedure Consultation. Please note that there are two versions of this document: public and confidential. We have included the public version for this report. Confidential responses will be shared with Ofgem as the Authority only.
- Attachment E contains the specific questions on which the Panel seeks your views. Please use this form to provide your responses to these questions, and to record any further views/comments you wish the Panel to consider.

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Not sure where to start?

We suggest reading the following sections:

- Have 5 minutes? Read section 1
- Have 15 minutes? Read sections 1, 7 and 8
- Have 30 minutes? Read all except section 6
- Have longer? Read all sections and the annexes and attachments.
- *You can find the definitions of the terms and acronyms used in this document in the BSC Glossary*[1]

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1 Summary

Why Change?

Currently customers (consumers of electricity) who are able to be flexible about their consumption cannot currently obtain any value from that flexibility from the Wholesale Energy Market, except if they work with their Supplier to do so. Therefore, customers can only obtain value from flexibility from working with their Supplier, and not from VLPs who may also be able to support flexibility services.

This is because the BSC assigns all flexibility delivered by a customer to their Supplier, with the exception of flexibility instructed by National Grid ESO in the Balancing Mechanism, which can be assigned to a third party (referred to in the BSC as a "Virtual Lead Party").

As a result, customers can only access power exchanges (and other markets that require notification of contracts under the BSC) though their Supplier. This contrasts with Balancing Services and the Capacity Market (CM), all of which allow a customer's flexibility to be offered by an aggregator without the involvement of the Supplier. This defect should be fixed primarily because it will remove a barrier to customers offering flexibility, and hence should increase participation and the level of effective competition in the wholesale market.

Solution

P415 will enable a VLP to trade Deviation Volumes on the wholesale market on behalf of their customer(s). These trades shall be captured in the same manner as existing Parties i.e. via Electricity Contract Volume Notifications (ECVN).

Deviation Volumes are a measurable commodity that represent an import/export MWh deviation to the Total System as a result of independent aggregation activity by a VLP.

Neither the counterparty nor registered Supplier shall bear any liability for delivery of the trade. On principle, the registered Supplier at a site where the customer has chosen to use a VLP independent aggregation service will receive no direct benefit nor detriment from such a service.

P415 Proposed Solution

Under the Proposed Solution, compensation costs are mutualised, with compensation paid at a price that approximates the Supplier's expected sourcing costs, obtained by using Ofgem's published Price Cap Methodology (PCM). The approach to 'who pays compensation' (mutualised under the Proposed Solution, paid by the VLP under the Alternative) is the only difference between the Proposed and Alternative Solutions. At the time of the Assessment Procedure Consultation, the Proposed Solution was what is now the Alternative Solution.

Please note that the Proposer of P415 is proposing this solution on the basis that it enables both a Proposed and Alternative solution to be brought before Ofgem (as they requested), which would not be possible otherwise, as described in further detail in Section 6 'Workgroup Discussions'. The Proposed and Alternative solutions have been flipped, such that the P415 Proposer does not believe that the Proposed solution is a better option that the Alternative, but does believe that it is better than the current BSC arrangements.

What are Deviation Volumes?

Deviation Volumes are a new type of Settlement volume introduced for P415 and represent the difference between what is forecast to be consumed / generated and what was actually consumed / generated (where the difference can be attributed to a VLP action taken at that site.)

Deviation Volumes represent an import/export MWh deviation to the Total System as a result of said action by a VLP.

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A minority of the BSC Panel and Workgroup members believe that the Proposed Solution is better than the Alternative Solution.

P415 Alternative Solution

Under the Alternative Solution (Proposed Solution at the time of the Assessment Procedure Consultation), VLPs are liable to pay compensation costs for volumes adjusted by that VLP, with compensation paid at a price that approximates the Supplier's expected sourcing costs, obtained by using Ofgem's published Price Cap Methodology (PCM).

A majority of the BSC Panel and Workgroup members (including the P415 Proposer) believe that the Alternative Solution is better than the Proposed and should be approved

Impacts & Costs

Costs Estimates			
Organisation	Implementation (£)	On-going (£)	Impacts
Elexon	£2.2-3.2 Million	£10k per year	Systems, documents and processes
Industry	Medium to Low	Low	Systems and processes
Total	£2.3-3.3 Million	0	

CBA Summary of Findings

On request of the BSC Panel and P415 Workgroup, CEPA performed a Cost Benefit Analysis (CBA) of P415 to provide information to the BSC Panel, P415 Proposer and P415 Workgroup on the potential benefits, costs and other impacts of implementing P415.

Further detail can be found in the CBA Final Report in Attachment C, but in summary:

1. The volume of additional flex that would be deployed as a result of P415 is highly uncertain.
2. The magnitude of benefits could be significant.
3. Costs of implementation are likely to be small relative to potential upside for benefits.
4. Some potential risks exist but are likely to be relatively low materiality with possible mitigations.

Assuming P415 does deliver additional volumes of flexibility, the CBA modelling suggests benefits could be material with the potential for £100s millions of consumer welfare benefit per year, considered across a range of scenarios.

Implementation

P415 is targeting implementation for 7 November 2024 as part of the November 2024 BSC Release.

The Proposer and Workgroup wish P415 to be implemented as soon as possible, if approved, but note that the necessary system change to enable the solution has a necessary lead time of one year following the point of Ofgem decision.

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Impact on EBGL Article 18 Terms and Conditions

Draft redlined changes to several areas of the BSC (described in further detail in Section 5 'Impacts and Costs' have been identified as falling under the European Balancing Guidelines (EBGL) Article 18 Terms and Conditions listed in BSC Section F Annex F-2, but the Proposer and Workgroup believe these impacts to be positive by better facilitating several of the EBGL Objectives.

Recommendation

The BSC Panel initially believe that whilst the Proposed Solution is better than the baseline, the Alternative Solution is better than the Proposed. Therefore, the initial recommendation is that the Alternative Solution is better than the Proposed, and further information can be found in section 8 ' Panel's Initial Discussions'.

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2 Why Change?

What is the issue?

Under the status quo, customers (consumers of electricity) who are able to be flexible about their consumption cannot currently obtain any value from that flexibility from the wholesale energy market, except if they work with their Supplier to do so. This is because the BSC assigns all flexibility delivered by a customer to their Supplier, with the exception of flexibility instructed by National Grid ESO in the Balancing Mechanism or Replacement Reserve market (TERRE), which can be assigned to a third party (referred to in the BSC as a "Virtual Lead Party".)

As a result, customers can only access power exchanges (and other markets that require notification of contracts under the BSC) though their Supplier. This contrasts with Balancing Services and the Balancing Mechanism which allow a customer's flexibility to be offered by an aggregator without the involvement of the Supplier.

This anomaly should be fixed primarily because it will remove a barrier to customers offering flexibility, and hence should increase participation and the level of effective competition the demand side can bring.

In addition, it is a requirement of the Clean Energy for All Europeans package (EU Directive 2019/944). Article 17, Clause 1 which states:

> *"Member States shall allow final customers, including those offering demand response through aggregation, to participate alongside producers in a non-discriminatory manner in all electricity markets."*

The same article goes on to clarify that the Supplier's permission must not be required.

Background

P415 relationship with P344, P375 and P376

Elexon note that aspects of the Settlement functionality needed to achieve a P415 solution had been implemented by P344: 'Wider Access and Project TERRE' which enables VLPs to participate in the Balancing Mechanism. P344 allows the separation of normal supply to the customer and the offering of normal flexibility from the customer.

Elexon also note that BSC modifications: P375 'Settlement of Secondary BM Units using metering behind the site Boundary Point' and P376: 'Utilising a Baselining Methodology to set Physical Notifications' introduce functionality that facilitates accuracy in determining settlement of actions the VLP has taken.

- P375 allows metering at the flexible asset; and
- P376 also provides baselining methodologies to separating out normal behaviour from flexibility.

Therefore P415 solution builds upon the functionality of P344, P375 and P376 to reduce cost and promote efficiency.

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P376: 'Utilising a Baselining Methodology to set Physical Notifications'

As new concept introduced by P415, Deviation Volumes capture the difference between what a site would tend to consume or generate without any action from VLP (called the baseline) and what was actually consumed/generated as a result of a VLP action taken at that site. Deviation Volumes represent an import/export MWh deviation to the Total System as a result of that action by a VLP.

In order to calculate Deviation Volumes, Settlement needs to be able to accurately forecast an expected BM Unit volume. P376 introduced a new defined item 'Settlement Expected Volume' which represents an expected BM Unit volume based upon historical metered volumes. P415 proposes to utilise this P376 functionality to set the baseline from which Deviation Volumes shall be measured.

Note: the consequence of this is that only Baselined Secondary BM Units will have wholesale market Deviation Volumes calculated.

Amending the P376 baselining solution for P415

P376 seeks to allow the expected flows at Supplier Volume Allocation (SVA) Metering Systems participating in the Balancing Mechanism (BM) to be calculated using an approved Baselining Methodology.

The new Settlement Expected Volume calculated from the baseline values will be decoupled from the Physical Notification used by the National Electricity Transmission System Operator (NETSO) for dispatch. It will be used in Settlement to calculate Non-Delivery Charges, allowing balancing service providers to be more accurately recompensed for their actual change from normal usage and the impact this change has on the system, thus enabling greater participation.

P375 is compatible with P376 so that Settlement is able to use a baselining methodology to set Physical Notifications (PNs) (i.e. calculating a 'Settlement Expected Volume) for Secondary BM Units (SBMUs) containing Asset Metering.

How does the baselining work?

Under P376, a VLP notifies Elexon that a SBMU is to be a Baselined BM Unit.

However not all MSID Pairs in a Baselined BM Unit may be suitable for using the baselining solution. Parties will need to monitor MSID Pairs in a Baselined BM Unit to ensure that the appropriate statuses are selected for each. The Party will select from the three statuses:

1) Baselined – MSID Pairs that will have their forecasted volumes determined using a Baselining Methodology.

2) Included in Party Submission – MSID Pairs in a Baselined BM Unit that will not have their forecast volumes determined using a Baselining Methodology. Instead Parties will submit an aggregate forecast of energy flows for these MSID Pairs.

3) Inactive – MSID Pairs in a Baselined BM Unit that will not be used to provide any balancing services and whose volumes will not be used in the calculations. Inactive MSID Pairs will not be able to have Delivered Volumes assigned against them.

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The Supplier Volume Allocation Agent (SVAA) then calculates a Settlement Expected Volume for Baselined BM Units using an agreed baseline methodology and historical metered consumption.

P375: 'Settlement of Secondary BM Units using metering behind the site Boundary Point'

P375 will allow Metering Equipment situated 'behind' the defined Boundary Point to be used for Settlement purposes in place of the Boundary Point Meter. P375 has been designed to be compatible with P376 so that Settlement will be able to use a baselining methodology to set Physical notifications (i.e. calculate a 'Settlement Expected Volume) for secondary BM Units containing asset metering.

Therefore the P415 solution shall be able to calculate Deviation volumes for Baselined BM Units (using the P376 functionality) that contains asset metering (using the P375 functionality).

What is an Event Day?

The Baseline Methodology creates a baseline based on normal usage and predicts what the MSID Pair should be doing. Therefore, it needs to discount days where the site is doing something not normal, such as providing a Balancing Service or to fulfil trades on the wholesale market. Current Event Day submissions provisions currently only recognise Balancing Services only and need to be amended. P415 shall amend the notification type options available for event day submissions to Settlement

Desired outcomes

Just as customers can participate in Balancing Services or the Balancing Mechanism by working with an independent aggregator, with no involvement from their Supplier, so they should also be able to participate in a similar manner in the wholesale energy market. This requires that dispatched flexibility volumes be separated from normal supply volumes, with different parties responsible for each.

To avoid duplication of effort, the mechanism for this should build on the Virtual Lead Party introduced by P344 for the Balancing Mechanism, should support the use of sub-Meters per P375 and baseline methodologies per P376 .

In a period in which a customer's consumption is being varied by a VLP so as to meet a wholesale market commitment, the customer's Supplier's balancing position should be unaffected. Any imbalances resulting from the VLP's portfolio failing to deliver the traded volumes during that period should be the responsibility of the VLP.

Provision of flexibility for wholesale market purposes under these new arrangements should be stackable with all other flexibility services – i.e. they should all be able to be offered and dispatched simultaneously, subject to the limitation that each unit of delivered energy can only be counted once.

Although we anticipate that in most cases the flexibility traded will be reductions in net consumption, there could be useful actions in the opposite direction, so the mechanism should be symmetrical

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3 Solution

P415 solution

P415 Solution Requirements

The following solution elements are shared between the P415 Proposed and Alternative Solutions.

Deviation Volumes

Deviation Volumes are a new type of Settlement volume introduced for P415 and represent the difference between what is forecast to be consumed/generated and what was actually consumed/generated (where the difference can be attributed to a VLP action taken at that site.)

Deviation Volumes represent an import/export MWh deviation to the Total System as a result of said action by a VLP.

For Example:

- VLP enacts an Early Shutdown (i.e. reduces demand at site boundary); or
- The Early shutdown (i.e. the demand reduction action) effectively results in an additional amount of MWh on the Total System.

Registration

P415 will require minor changes to BSC registration, Qualification and communication processes to facilitate wholesale market access for VLPs. To remove barriers to entry P415 creates a new Trading Party category of VLP to facilitate access to the wholesale market. This effectively means that an Independent Aggregator shall be able to access the wholesale market and balancing markets separately (i.e. via distinct BSC Participation Capacities) removing the Qualification and compliance burden on Independent Aggregators who only want access to a single market.

Performance Assurance Activities

Under the BSC, to participate in the Supplier Volume Allocation (SVA) market Parties have to complete SVA Qualification (including the VLP Participation Capacity) to provide assurance that their systems and processes have been developed in line with BSC requirements. Qualification also helps check that systems won't pose a risk to Settlement.

Whilst the new Trading Party (in the new category of VLP) is distinct and separate from the existing VLP Participation Capacity it will still operate in the SVA market (i.e. allocate MSID Pairs to Secondary BM Units and submit Delivered Volumes) and therefore SVA Qualification will also be needed.

Currently all BSC Parties and Party Agents must demonstrate the required ability to communicate with BSC Central Systems and this Qualification process delivers the aforementioned assurances.

As a Trading Party (in the new category of Virtual Lead Party) a VLP is distinct and separate from the existing VLP Participation Capacity, CVA Qualification will also be needed.

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Secondary BM Units

A Trading Party (in the new category of Virtual Lead Party) shall be able to register Secondary BM Units in the same manner as existing VLP participation capacity. Secondary BM units shall continue to have the same requirements and restrictions as per the existing arrangement.

A Secondary BM Unit must satisfy the following conditions:

a) the Secondary BM Unit does not comprise of CVA Metering System(s);

b) the Secondary BM Unit may only comprise of Half Hourly SVA Metering System(s) and/or flows to and from which are measured by an Asset Metering System;

c) a Secondary BM Unit shall not have a Half Hourly SVA Metering System allocated to it which is allocated to another Secondary BM Unit at the same time;

d) a Secondary BM Unit does not comprise of Half Hourly SVA Metering System(s) and/or Asset Metering Systems in more than one GSP Group; and

e) a Secondary BM Unit may have an Asset Metering System allocated to it which is allocated to one other Secondary BM Unit at the same time, provided that the Asset Metering System is used solely for Asset Differencing.

Credit Cover

Independent Aggregators who register and qualify as a Trading Party (in the new category of Virtual Lead Party) will pay their Trading Charges approximately 29 calendar days after a Settlement Day occurs (like all Trading Parties). Over this period a Party's Credit Cover ensures it has enough collateral to cover these payments in case of default.

Secondary BM Units (whose lead party is VLP Trading Party) shall be treated as a Non-Credit qualifying BM Unit.

Energy Indebtedness (EIpj) for Secondary BM Units shall be the sum over the previous 29 calendar days (including the current Settlement Day) of Credit Assessment Energy Indebtedness (CEI), Metered Energy Indebtedness (MEI) and Actual Energy Indebtedness (AEI)

As a Trading Party (in the new category of Virtual Lead Party) is not exempt from being in Default of the BSC, the BSC Panel shall have the same powers and rights in relation to these Parties as it does for existing Trading Parties as outlined in Section A 'Parties and Participation'.

Contract Notifications

Trading Parties (in the new category of Virtual Lead Party) shall function in the same ways as existing Trading Parties in regards to the submission of wholesale market traded volumes to Settlement i.e. via submission of Electricity Contract Volume Notification (ECVN) and Metered Volume Reallocation Notification (MVRN).

Calculating SBMU Deviation Volumes

As a Trading Party (in the new category of Virtual Lead Party) an aggregator will likely not be active (in either the BM or wholesale markets) in every Settlement Period during a Settlement Day and therefore should only be allocated Deviation Volumes when they are active.

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- When a Trading Party (in the new category of Virtual Lead Party) is activated in the BM NGESO sends a Bid Offer Acceptance (BOA) to Settlement.
- When a VLP is activated in the wholesale market the Trading Party (in the new category of Virtual Lead Party) shall be obligated to inform Settlement when they are active in the wholesale market.

Receipt of either a BOA from NGESO or a wholesale market notification from a Trading Party (in the new category of Virtual Lead Party) shall trigger the calculation of Deviation Volumes. This ensures that only VLP-triggered deviations are attributed to Independent Aggregators and ensures integrity of Settlement.

MSID Pair Delivered Volume

Under the current BSC arrangements a VLP is obligated to notify Settlement of the load deviations it has actioned at each non-baselined MSID Pair (and Baselined MSID Pair with the status of submitted) within its portfolio when fulfilling each balancing action.

This obligation is to be expanded to include both balancing actions and wholesale market activity. Note: that there is no obligation to differentiate between Balancing and wholesale market volumes (as the VLP may be active in both at the same time). Therefore the MSID Pair Delivered Volume will represent to total deviation action at a site.

The VLP impacted Suppliers Imbalance adjustments (designated within the BSC as the Period Supplier BM Unit Delivered Volume (QBSDij)) is calculated by aggregating the Period Secondary BM Unit Supplier Delivered Volume (QSDiji2) from all Secondary BM Units that impact the Supplier BM Unit.

- QBSDij = Σi2QSDiji2
- where Σi2 represents the sum over all Secondary BM Units i2 for which Primary BM Unit "i" is to be allocated a value of QSDiji2.

However QSDiji2 is based on the physically-delivered VLP Balancing Volumes and the aforementioned VLP MSID Pair Delivered Volumes.

Therefore new arrangements need to be introduced for the volumes affected by a Trading Party (in the new VLP role) to account for wholesale market activity.

These new arrangements need to work in parallel with the existing arrangements to ensure that the Elexon can settle Suppliers accurately for Trading Parties (in the new role of VLP) that impact their imbalance position.

Imbalance Settlement

Trading Parties who are VLPs shall not be allocated metered volumes from Secondary BM Units.

Secondary BM Units shall be allocated Deviation Volumes. Credited Energy Volumes represent Metered Volumes and as Deviation Volumes are distinct Metered Volumes they cannot be allocated here. Therefore a new entry is needed in the energy imbalance volume calculation to represent Deviation Volumes

Benefits

P415 is intended to offer benefits to consumers by enhancing flexibility of demand to meet periods of high and low Renewable Energy Sources (RES) output. The P415 CBA in

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attachment C identified the potential for significant benefits where P415 leads to deployment of significant volumes of additional flexibility. While benefits hold with lower volumes, they are more marginal.

Total welfare impacts were found to be positive under all scenarios and under both Compensation variants in the CBA.

The most likely wider benefits were considered to be from spill over effects to other markets – CM, balancing market, local flexibility markets – particularly given the need for many flexibility providers to stack revenues.

However, the CBA reported that CEPA did not expect these non-modelled benefits to be large enough to significantly influence their overall welfare assessment.

The Cost Benefit Analysis highlighted that costs of implementation are not negligible (low £10s millions up front implementation costs with £1s millions annual costs) and could outweigh benefits if P415 delivers only very small amounts of additional flexibility but the potential upside benefits could dwarf implementation costs if P415 results in even moderate volumes of additional flexibility.

P415 alternative solutions

Over the course of assessment of P415, the Workgroup discussed several approaches to the liability for payment of Supplier compensation and the price at which it should be paid. As discussed in further detail in Section 6 'Workgroup Discussions', variants of the solution that varied the price at which compensation payments should be paid were ultimately not taken forward, but the Proposer and Workgroup have developed the following Proposed and Alternative solutions.

P415 Proposed Solution

Under the P415 Proposed Solution, also referred to as Supplier Compensation 3:

- Compensation costs are mutualised across all Suppliers; and
- Compensation is paid at a price that represents the average Supplier sourcing costs.

It should be noted that the Proposer of P415 is presenting this solution on the basis that it enables both a Proposed and Alternative solution to be brought before Ofgem, which would not be possible otherwise, as described in further detail in Section 6 'Workgroup Discussions'. The P415 Proposer prefers that compensation is paid by the VLP and does not believe that the Proposed Solution is a better option that the Alternative, but does believe that it is better than the current BSC arrangements.

P415 Alternative Solution

Under the P415 Proposed Solution, also referred to as Supplier Compensation 1:

- VLPs (as the Balancing Responsible Party) are liable for compensation costs; and
- Compensation paid at a price that represents the average Supplier sourcing costs.

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Ofgem Price Cap Methodology

Under both the Proposed and Alternative Solutions the Supplier Compensation Reference Price approximates the average Supplier's sourcing costs.

Ofgem's published Price Cap Methodology (PCM) will be used to calculate this figure.

The PCM figure used will be the single rate metering arrangement with the inclusion of an allowance for:

- shaping, forecast error and imbalance;
- transaction costs; and
- basis risk.

If Ofgem were to no longer utilise a price cap methodology, or if this methodology were no longer suitable, Elexon will develop the methodology to produce the part required by P415, so in the event that this cannot be done before the final price cap period expires, the existing price cap will be maintained until such a time that it is no longer required.

In this circumstance, the BSC Panel shall agree the Supplier Compensation Price Methodology and which third part service provider should be used to obtain the relevant data for use in Settlement. A new Category 3 BSC Document (under the supervision and control of the BSC Panel) would contain the Supplier compensation methodology to allow appropriate governance controls and transparency to industry.

Legal text

The legal text to deliver the intent of P415's Proposed and Alternative solutions can be found in Attachment A.

Responses to the Assessment Consultation

Do you agree with the Workgroup that the draft legal text in Attachment A delivers the intention of P415?			
Yes	No	Neutral/No Comment	Other
8	2	1	1

Please note that, at the time of the Assessment Consultation, no formal Alternative had been raised, and what was referred to as the Proposed Solution (Compensation 1) has now become the Alternative. Legal Text to support the new Proposed Solution will be issued as part of the Report Phase Consultation, so that industry have an opportunity to review.

Responses were largely supportive or provided no comment or remained neutral. One 'No' was received, as the respondent couldn't find the attachment at the time of replying.

Report Phase Consultation Questions
Do you agree with the Panel that the redlined changes to the BSC deliver the intention of P415 for the Proposed and Alternative Modifications? *Please provide your rationale.*
The Panel invites you to give your views using the response form in Attachment E

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Estimated implementation costs of P415

- High: >£1 million
- Medium: £100-1000k
- Low: <£100k

Implementation cost estimates			
Organisation	Item	Implementation (£)	Comment
Elexon	Systems	£2.2-3.2 Million	New systems and processes will be needed to allow for effective data and settlement flows regarding deviation volumes to account for VLP flexibility actions, to reflect imbalance settlement arrangements and to introduce the relevant compensation flows and procedures
	Documents	£2K	
NGESO	Processes	Unknown but expected to be low	Will need to receive additional information relating to VLPs' intended Deviation Volumes from VLPs using the P415 process
Industry	Systems & processes	£40 - £100K	Extrapolated from responses to Call for Evidence under the CBA, and limited responses to the Assessment Consultation.
	Total		

Estimated on-going costs of P415

On-going cost estimates		
Organisation	Costs (£)	Comment
Elexon	£10K per year	New systems and processes will be needed to allow for effective data and settlement flows regarding deviation volumes to account for VLP flexibility actions, to reflect Imbalance Settlement arrangements and to introduce the relevant compensation flows and procedures
NGESO	None anticipated	
Industry	Low	Extrapolated from limited response to CBA Call for Evidence and limited responses to the Assessment Consultation.

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On-going cost estimates		
Organisation	Costs (£)	Comment
Total	Low ongoing costs anticipated	

P415 impacts

Cost Benefit Analysis Identified Impacts and Benefits

During consideration of the Initial Written Assessment the BSC Panel requested that a Cost Benefit Analysis (CBA) be undertaken to provide information to the BSC Panel, P415 Proposer and P415 Workgroup on the potential benefits, costs and other impacts of implementing P415.

Following a procurement process to deliver the analysis on behalf of the P415 Workgroup, CEPA was chosen as the service provider to deliver this analysis and delivered its final CBA report in September 2022.

The full CBA report can be found in Attachment C, what follows is a summary of the key findings.

In their response to the P415 CBA call for evidence, Suppliers reported medium to low implementation costs (ranging from £500K to £40K) in order to develop systems to monitor and validate charges and revenues and register as a VLP. Low ongoing costs (ranging from £100K to £40K) were reported to maintain the data and operational efficiency of any system changes, as well as increased customer outreach and account management associated with P415.

VLPs reported low implementation and ongoing costs, noting that P415 is an elective process (existing VLPs will not be forced to register to the wholesale market) and almost all the functionality needed for P415 is already required for BM participation (and for aggregation more generally), i.e the processes required for P415 (when considered in isolation from P344/P375/P376) are relatively simple

The Final CBA Report also noted that implementation costs are not negligible and could outweigh benefits if P415 delivers only very small amounts of additional flexibility. These costs are expected to be in the low £10s of millions for up front implementation costs, and in £1s millions annual costs (this is an aggregate industry position). However, the potential upside benefits could dwarf implementation costs if P415 results in even moderate volumes of additional flexibility.

CBA Findings

CEPA described how P415 will provide a new route to market for flexibility providers that does not currently exist. Its implementation could promote competition for flexibility services and encourage suppliers to develop better flexibility propositions themselves.

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A review of aggregated DSR in international markets provides examples of aggregator business models contributing flexibility to a range of markets. However, these markets are generally at an early stage and there are no examples of aggregated DSR deployment at the kind of volumes included in CEPA's modelled scenarios.

There is also uncertainty about technology uptake that could facilitate flexibility potential.

It remains possible that P415 could deliver only very small volumes of additional flexibility:

- Existing routes to market already exist for flexibility provision;
- Suppliers are already actively developing customer flexibility propositions in the absence of P415; and
- Customers may reveal a preference for a single integrated energy and flexibility service from a single provider rather than multiple agreements.

CEPA accounted for uncertainty of flexibility deployment in their modelling in two ways:

1. CEPA place their modelled analysis into the context of three Future Energy Scenarios scenarios; and
2. CEPA adopt a range of assumptions for the additional volume of flexibility that P415 would deliver.

Total welfare

Please note that at the time the CBA was undertaken, only Compensation 1 and 2 had been developed by the Workgroup. Therefore specific analysis of Compensation 3 (which shares the mutualisation aspect with Compensation 2 but differs from Compensation 2 in that the cost of compensation is derived from a Supplier's approximate sourcing cost, rather than the day ahead spot price) was not possible.

Even though Compensation 3 was not considered by the CBA, Elexon believe that the additional benefits provided by mutualised compensation will not be significantly reduced from analysis of Compensation 2.

Total welfare impacts were found to be positive under all scenarios and under both Compensation variants (please note these welfare impacts do not take into account fixed costs that would need to be recovered by VLPs/flexibility providers).

Total welfare benefits were found to scale with the deployment of additional flexibility. As Compensation 2 lowers the variable cost for VLPs when delivering flexibility, the CBA observes more flex deployment and larger total welfare benefits.

CEPA's 'no flexibility' sensitivity demonstrated that the findings were reasonably robust to different beliefs about additionality of flexibility capability by P415.

Distributional effects and flexibility provider welfare

Rather, the CBA outcomes indicated that the socialised compensation costs in Compensation 2 were found to result in a cost burden transfer from those consumers that don't provide flexibility to those consumers that do.

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Producer surplus

By shifting demand to periods of high RES output, both compensation variants were found to help to avoid the need for curtailment of RES, helping new RES generators to recover greater revenues.

The producer surplus benefits were found to be larger under Compensation 2 as CEPA found more load shifting flexibility is deployed.

Non-modelled benefits

The most likely wider benefits were found to be from spillover effects to other markets – CM, balancing market, local flexibility markets – particularly given the need for many flexibility providers to stack revenues.

However, CEPA did not expect these non-modelled benefits to be large enough to significantly influence their overall welfare assessment.

Risks and unintended consequences

CEPA found that risks of consumer detriment due to the VLP-consumer relationship may exist but are not as material as the supplier relationship with consumers given the different responsibilities and activities of a VLP.

Suppliers face some new potential risks from P415. The design of P415 protects them from some risk as Suppliers are compensated for the lost opportunity to sell energy and have their imbalance position corrected where a VLP takes responsibility for a flexibility action. They may face additional forecasting and hedging challenges, particularly in relation to load shifting activities. However, these risks may become increasingly prevalent as flexibility evolves, even without P415.

The baselining methodology may be more applicable to large industrial and commercial customers but may not reflect less predictable and less consistent demand patterns of small residential and commercial customers. Risks regarding inaccurate baselines and 'baseline gaming' could be more material for such customers.

CEPA identified a potentially material gaming risk under Compensation 2 as a Supplier could 'benefit twice' from deploying flexibility from its own customer as a VLP. This would come at an additional cost to the rest of the market and the Workgroup's response is discussed in Section 6. 'Workgroup Discussions'

Impact on BSC Parties and Party Agents		
Party/Party Agent	Impact	Estimated cost
Suppliers	Suppliers may need to introduce new systems and processes to align with BSCCo's own systems	M

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Impact on BSC Parties and Party Agents		
Party/Party Agent	Impact	Estimated cost
VLPs	VLPs may need to introduce new systems and processes to align with BSCCo's own systems	L

Impact on the NETSO	
Impact	Estimated cost
NGESO will need to receive additional information relating to VLPs' intended Deviation Volumes from VLPs using the P415 process. This high level requirement has been captured while exact data formats and interfaces will be developed during the implementation phase for this Modification, should it be approved	Unknown

Responses to the Assessment Consultation

Will P415 impact your organisation?			
Yes	No	Neutral/No Comment	Other
5	1	2	4

VLPs reported impacts that were largely positive and elective, involving development and ongoing operational effort by their organisation to integrate wholesale market access into offerings to customers. One VLP reported that, however, compared to the broader Wider Access reforms (P344/P375/P376), this was expected to be a relatively small incremental effort to set up new processes for trading to complement their existing trading desks, and implement new decision making activities.

Several VLPs noted that the eventual chosen compensation mechanism would affect the impact and ultimately the business case for activity and investment in the GB market, possible leading to some choosing not to do so under Compensation 1.

One Supplier reported a low impact resulting from P415, but one that would require minor system changes and additions and potentially additional FTE to manage this new process. However they also noted that, while the introduction of P415 would open their customers to competitors looking to offer them flexibility services, they welcomed more competition into the market on the basis that it will increase customer education and interest in flexible demand thereby increasing the pool of customers to compete over, also helping to introduce more innovation into this space.

NGESO reported no direct impact but stated that the P415 solution will allow VLPs the option of direct access to the wholesale market which may encourage larger volumes of participation, and that they were supportive of greater competition and participation to encourage more efficient use of the system, as well as reducing barriers to entry and widening of the market, which in turn will enable additional volumes of demand flexibility.

However, in relation to P415, NGESO reported concerns over information provision and a lack of transparency regarding VLP provision of data to ESO leading to a risk to real time

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operation of the system. Further work to bottom out and address these concerns (which ultimately led to the addition of a high level requirement for VLPs to provide additional DV information to NGESO, which is captured in Section 6.

Responses to the Assessment Consultation

How much will it cost your organisation to implement P415?			
Yes	No	Neutral/No Comment	Other
3	4	1	3

VLPs reported implementation costs, but were unable to provide a full and formal estimate.

One VLP stated that Wider Access in general (P344/P375/P376) has required a large degree of implementation effort but to them, P415 is a relatively small incremental change. They were confident that the benefits would substantially outweigh implementation costs, which was echoed by another VLP respondent who believe the change will have a net positive impact, so overall costs would be negative.

Several VLPs highlighted that costs are heavily dependent on the compensation methodology applied, with some reporting that if Compensation 2 or 3 were to be chosen, most of the cost will be borne by the rollout of their technology. However If Compensation 1 were to be chosen, they would have to pay direct, full compensation to Suppliers on top of rollout and operating costs, plus power market products stacking costs. This would prevent domestic aggregators from rolling out technologies at scale, and therefore would prevent most of them from entering the market, according to this respondent.

One Supplier estimate a cost of £100k-£500k to make the necessary changes to systems to monitor and validate charges and revenues.

Responses to the Assessment Consultation

What will the ongoing cost of P415 be to your organisation?			
Yes	No	Neutral/No Comment	Other
0	0	5	2

Respondents reported that ongoing costs were low where there was an impact on participants. Some VLPs reported that the costs of implementing P415 were expected to be negligible if the solution chosen for P415 does not create a barrier to independent VLPs.

Another VLP responded highlighted that there would be very little incremental operational overhead specifically caused by P415 but did describe a knock-on effect: carrying out wholesale market trades involves trading fees and some changes to risk management functions, which do have ongoing costs. Again, this VLP was confident that their benefits would outweigh these costs, so were not concerned about them.

A Supplier reported ongoing costs of £50-£100k in order to maintain the data and operational efficiency of any system changes, which was estimated to incur an additional 1FTE per annum.

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Responses to the Assessment Consultation

How long (from the point of approval) would you need to implement P415?
A few months to 1 year

Respondents reported lead times ranging from a few months to 1 year. Several VLP respondents noted that because it builds on P375 and P376, and the VLP/AMVLP roles are already defined by Elexon, the implementation of P415 could be done quickly on approval.

Impact on BSCCo		
Area of Elexon	Impact	Estimated cost
Settlement and Invoicing Participant Management Performance Assurance	New systems and processes will be needed to allow for effective data and settlement flows regarding deviation volumes to account for VLP flexibility actions, to reflect imbalance settlement arrangements and to introduce the relevant compensation flows and procedures.	H

Impact on BSC Settlement Risks
Any risks to be tracked under Risk 25; the new risk assesses the Balancing Services provided by Virtual Lead Parties allowing error to enter Settlement, such that the energy volumes required for Settlement are incorrect or missing

Responses to the Assessment Consultation

Do you agree with the Workgroup's assessment of the impact on the BSC Settlement Risks?			
Yes	No	Neutral/No Comment	Other
4	0	8	0

Respondents either agreed with the assessment of impacts on the BSC Settlement Risks or remained neutral on this point.

Impact on BSC Systems and process	
BSC System/Process	Impact
Supplier Volume Allocation Agent Data Calculations Platform (SVAA DCP)	New systems and processes will be needed to allow for effective data and Settlement flows regarding deviation volumes to account for VLP flexibility actions, to reflect

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Impact on BSC Systems and process	
BSC System/Process	Impact
Participant Management Platform (PMP)/ Central Registration Agent (CRA)	imbalance settlement arrangements and to introduce the relevant compensation flows and procedures.
Funds Administration Agent (FAA)	
Energy Contract Volume Aggregation Agent (ECVAA)	
Elexon Portal	
Settlement Administration Agent (SAA)	

Impact on BSC Agent/service provider contractual arrangements	
BSC Agent/service provider contract	Impact
BSC Agents	None anticipated

Impact on Code	
Code Section	Impact
BSC Section A	Allowing a VLP to register as a Trading Party in the new role
BSC Section D	Describing the main charge to be applied for the new Trading Party
BSC Section J	Covering registration qualification of the new Trading Party
BSC Section K	BM Unit registration for the new Trading Party Credit qualification for the new Trading Party GC/DC determination for the new Trading Party
BSC Section M	Update to credit indebtedness calculation to cover deviation volumes Calculation of GC/DC for the new Trading Party
BSC Section N	Addition of the new cashflows
BSC Section P	Allowing the new trading party to be the subsidiary party to MVRNs
BSC Section S	Include under delivered volumes in accordance with BSCP602 (SVA Metering System & Asset Metering System Register) Include in event day submission Submission of wholesale market activity notification

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Impact on Code	
Code Section	Impact
BSC Section S-2	(For Compensation 1) Allowing delivered volumes to be calculated when a wholesale market activity notification is received (For Compensation 3) Calculation of gross demand for each Supplier BM Unit Provision of gross demand to SAA Calculation of non-final gross demand for each supplier BM Unit Provision of non-final gross demand to SAA
BSC Section T	Calculation of deviation volumes Calculation of the account level period deviation volume Calculation of supplier delivered volumes for secondary BM Units under the new trading party Addition of the new cashflows (For Compensation Method 1) Reference to a new methodology to obtain the supplier compensation reference price Allowing the Panel to own and update the methodology Calculation of compensation cashflows (For Compensation Method 3) Reference to a new methodology to obtain the supplier compensation reference price Allowing the Panel to own and update the methodology Receiving Gross and Non-Final demand data from SVAA Calculation of supplier final demand proportions and compensation cashflows
BSC Section X-1	Updates to cover new terms
BSC Section X-2	Updates to cover new terms

Impact on EBGL Article 18 terms and conditions
This Modification is not expected to impact Balancing under the BSC but does impact the BSC provisions that constitute EBGL Article 18 Terms and Conditions, as described in BSC Section F, Annex F-2. The Workgroup believe these amendments do not materially amend the EBGL Article 18 Terms and Conditions for the reasons given below.

Impact on EBGL Article 18 Terms and Conditions

The drafting of the P415 Legal Text impacts several BSC provisions that constitute EBGL Article 18 Terms and Conditions listed in BSC Section F Annex F-2. This impact will be

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consulted on as part of the Report Phase Consultation, with a concurrent EBGL consultation on the P415 proposal to run for one calendar month.

Within the redlining there are numerous clauses, within six documents, that have an impact on the EBGL Article 18 Terms and Conditions within the BSC. Due to this, the redlining will be issued for a one-month EBGL industry consultation to meet the EBGL change process obligations.

BSC Section	Clauses Impacted
Section A	Entire BSC Section affected under EBGL
Section J	3.3
Section N	6
Section P	3
Section S	11
Section T	4

Impact of the Modification on the Relevant EBGL Objectives:	
Relevant Objective	Identified impact
(a) Fostering effective competition, non-discrimination and transparency in balancing markets;	**Positive**
(b) enhancing efficiency of balancing as well as efficiency of European and national balancing markets;	Neutral
(c) integrating balancing markets and promoting the possibilities for exchanges of balancing services while contributing to operational security;	Neutral
(d) contributing to the efficient long-term operation and development of the electricity transmission system and electricity sector in the Union while facilitating the efficient and consistent functioning of day-ahead, intraday and balancing markets;	Neutral
(e) ensuring that the procurement of balancing services is fair, objective, transparent and market-based, avoids undue barriers to entry for new entrants, fosters the liquidity of balancing markets while preventing undue distortions within the internal market in electricity;	Neutral
(f) facilitating the participation of demand response including aggregation facilities and energy storage while ensuring they compete with other balancing services at a level playing field and, where necessary, act independently when serving a single demand facility;	**Positive**
(g) facilitating the participation of renewable energy sources and support the achievement of the European Union target for the penetration of renewable generation.	Neutral

The Workgroup believe that P415 is neutral against most of the EBGL Objectives and positive against (a) and (f), as P415 is expected to foster effective competition and facilitate demand response by increasing the ability of market participants to introduce greater demand response into the wholesale market.

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Responses to the Assessment Consultation

Do you agree with the Workgroup's assessment that P415 does impact the European Electricity Balancing Guideline (EBGL) Article 18 terms and conditions held within the BSC?			
Yes	No	Neutral/No Comment	Other
5	0	7	0

Respondents either agreed with identified impacts on EBGL or remained neutral on this point. Several respondents commented that the purpose of P415 is to remove discrimination and foster greater competition from demand-side resources so it should be expected to benefit objectives (a) and (f).

Impact on Code Subsidiary Documents	
CSD	Impact
BSCP01	reference new role and data flow
BSCP15	reference new role (as able to register Secondary BM Units)
BSCP65	reference new role
BSCP70	reference new role
BSCP507	reference new role (in relation to MSID pair processes)
BSCP508	reference new role
BSCP537	reference new role
BSCP602	add new process
New Category 3 BSC Document	A new subsidiary document containing the Supplier compensation methodology

Impact on a Significant Code Review (SCR) or other significant industry change projects
There is no impact on any open SCR. Ofgem confirmed this view on 8 October 2020.

What are the consumer benefit areas?

1) Will this change mean that the energy system can operate more safely and reliably now and in the future in a way that benefits end consumers?

2) Will this change lower consumers' bills by controlling, reducing, and optimising spend, for example on balancing and operating the system?

3) Will this proposal support:
i)new providers and technologies?
ii) a move to hydrogen or lower greenhouse gases?
iii) the journey toward statutory net-zero targets?
iv) decarbonisation?

4) Will this change improve the quality of service for some or all end consumers. Improved service quality ultimately benefits the end consumer due to interactions in the value chains across the industry being more seamless, efficient and effective.

5) Are there any other identified changes to society, such as jobs or the economy.

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Impact of the Modification on the environment and consumer benefit areas:	
Consumer benefit area	Identified impact
1) Improved safety and reliability Additional flexibility will help to smooth out demand curves and peaks, promoting reliability.	**Positive**
2) Lower bills than would otherwise be the case Additional flexibility is expected to smooth out periods of unusually high demand, which would normally result in an increase to bills	**Positive**
3) Reduced environmental damage Additional flexibility is expected to reduce demand for energy produced from environmentally damaging sources.	**Positive**
4) Improved quality of service N/A	Neutral
5) Benefits for society as a whole Aforementioned benefits are expected to lead to a net positive for society as a whole	**Positive**

P415 would enable wider customer access and participation in the wholesale market. The unlocking of flexibility is expected to lead to benefits for society as a whole.

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5 Implementation

Recommended Implementation Date

The Workgroup and BSC Panel recommends an Implementation Date for P415 of:

- 7 November 2024 and part of the Standard November 2024 BSC Release;

To support this release date, Elexon require a decision from the Authority to approve P415 on or before 6 October 2023.

The P415 Proposer and Workgroup desire implementation of P415 as soon as reasonably possible, if approved, to unlock the benefits. In their view this would ideally be sooner than 2024 but the group note the necessary system changes at both the Elexon and industry level (and associated lead time of at least 1 year) that make it extremely challenging to implement any sooner than this timeframe.

The P415 Workgroup strongly recommend to Ofgem that an aligned decision be made with consideration to P444 'Compensation for Virtual Lead Party actions in the Balancing Mechanism', to unlock the benefits associated with implementing both Modifications with the same compensation mechanism at the same time, and to avoid a situation where the markets are mismatched in their approach should a different compensation mechanism be chosen for each Modification.

Responses to the Assessment Consultation

Do you agree with the Workgroup's recommended Implementation Date?			
Yes	No	Neutral/No Comment	Other
4	7	1	0

A majority of respondents disagreed with implementation in November 2024, which Elexon had previously highlighted as the earliest possible time to implement P415 due to the year lead time to implement the system change to deliver the Modification.

Responses disagreeing with this approach while cognisant of the necessary steps to be taken as part of the Modification process, mostly centred around believing that more urgent timelines should be followed for P415 to unlock the positive impacts it offers to electricity markets especially given the difficult market conditions and high prices faced by consumers that P415 would help to alleviate, with several respondents noting that urgent timescales had been followed to deliver P447 'Avoiding impact of Winter Contingency actions on cash-out prices' and P446 'Domestic Energy Price Guarantee Scheme' in time for the previous winter.

One Supplier replied that they believed the Implementation date is too ambitious for the appropriate work to be completed, as they did not feel the solution had been fully developed to ensure that it is practical and delivered in a way that delivers value for consumers.

Report Phase Consultation Question
Do you agree with the Panel's recommended Implementation Date? *Please provide your rationale.*
The Panel invites you to give your views using the response form in Attachment E

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6 Workgroup's Discussions

17 Workgroup meetings were held for P415, with the first taking place on 11 December 2020 and the final meeting on 28 March 2023.

Key Principles for Solution Development

What is a VLP trading in the wholesale market?

The starting point for discussions was recognising that within the wholesale market actors trade power as a product in 30-minute intervals.

The group considered the Ofgem definition of an Independent Aggregator as 'parties who bundle changes in consumer's loads or distributed generation output for sale in organised markets and who do not simultaneously supply the customer with energy.'

Acknowledging that VLPs are not Suppliers, the Workgroup drew a similarity between Non Physical Traders (NPTs) and VLPs (in that the Supplier continues to supply electricity to the site and to invoice them accordingly, but the responsibility for trading and delivering those volumes – presently Deviation Volumes in the context of P415- lays with another party).

By acting on a site, a VLP is effectively creating a change in load that would result in an imbalance on a Supplier's account under existing Settlement arrangements (i.e. the Supplier imbalance position will change). If the VLP action causes Metered Volumes to increase then the Supplier is short and if the VLP action causes Metered Volumes to go down the Supplier is long. Those long and short position changes are to be measured (via a new settlement volume to be known as Deviation Volumes) and allocated to the VLP who will take all the Balancing Responsibility for delivering these Deviation Volumes (and can then either close that position through trades or accept the cash out price if desired).

Discussion then turned to the impact on the Supplier's imbalance position caused by VLP activity noting that should the VLP be allocated the imbalance volumes it causes the Supplier should be adjusted to reflect the change in Balancing Responsibility. The Proposer agreed and noted that Settlement already does this under the P344 arrangements to settle VLP balancing volumes. Elexon agreed to add solution principle 4 to capture this requirement.

The Workgroup then noted that in this context Metered Volume always remain with the Supplier, but would now be extended to add Deviation Volumes. The VLP will be responsible for the imbalance volume that the Supplier would have otherwise had (if not for the imbalance adjustment applied by Settlement to include this extension).

The Workgroup agreed this should be the Settlement rule underpinning the P415 solution.

What is the role of a VLP in the wholesale market?

Summary:

- Is VLP role equivalent to a Supplier or Generator? **NO**
- Ofgem licence required? **Out of scope**

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Could VLPs be considered a Supplier under P415?

The group noted that the role of Supplier is a licenced activity i.e. Ofgem requires a license for any Supplier activity which details a number of requirements including many outside of the scope of the BSC (e.g. interactions with the end consumer).

The group recognised that the Ofgem's definitions of Independent Aggregators as 'parties who bundle changes in consumers loads or distributed generation output for sale in organised markets and who do not simultaneously supply the customer with energy' helps to clarify the role and purpose of VLPs.

The group were comfortable that Independent Aggregators/Virtual Lead Parties function as a service involving a customer and are not a Supplier because they don't supply the site as part of their business model and do not charge the customer for the volume that they consume.

Could VLPs be considered a Generator under P415?

After discussion, the Workgroup agreed that Independent Aggregators/Virtual Lead Parties cannot be considered a Generator as they do not legally own generation assets at site (i.e. the site itself may be a generator which may or may not require a license) but rather provide a service based on managing appliances and generation assets on those sites.

Could VLPs be considered a Non Physical Traders under P415?

The group noted that Non Physical Traders also trade electricity from Generators, Suppliers and other Trading Parties, buying volumes and selling them on to make a margin but also not considered to supply a site and therefore have no Supplier responsibilities or requirements to hold a licence.

After discussion it was agreed that Aggregators/Virtual Lead Parties are significantly different in function and purpose than Non Physical Traders. Also the group noted the additional settlement and VLP qualification requirements that will be needed to accurately settle any VLP trades. Therefore it was thought best to separate the roles/activities.

Should VLPs operating in the Wholesale Market be a Licensable Activity?

The group raised several questions around licensing, identifying that this would be an important area to discuss and pass feedback and questions on to Ofgem, as this area that sits outside the BSC.

It was noted that licenses create obligations (such as reporting obligations) with wholesale market customers over and above those to do with the BSC, and that several Workgroup members were concerned about this area and the obligation that suppliers have owing to deals with their customers, particularly in forward markets.

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A Supplier representative pointed out that they have no problem with VLPs having access to the wholesale market, but stressed the need for careful consideration into whether P415 would balance the right rules for VLP to participate versus more onerous ones that are on Suppliers, ultimately making sure that the market is competitive.

It was agreed that licence conditions need to be looked at and carefully considered but this area would not in scope of a BSC Modification. The P415 group may not be able to directly impact licensing but agreed that it is important to feed these concerns and discussions back to Ofgem because, if they felt the issue was broad enough and sufficiently worth pursuing, they could subsume P415 into a Significant Code Review.

Should VLPs comply with REMIT requirements?

The group also questioned whether VLPs would be subject to REMIT reporting requirements under P415.

Noting that REMIT is intended to address potential market manipulation and insider information by placing responsibility on the party to make sure they don't undertake market manipulation, the group considered that contracts such as the Grid Trade Master Agreements (GTMAs) have to be reported by Suppliers in order to trade in forward markets. The group were of the opinion that VLPs shouldn't be absolved from the obligation to report what they've traded and that they would have to comply with all REMIT regulations to avoid any potential for engaging in behaviour that would unduly influence the price to their benefit.

The group were comfortable with this assumption and support that VLPs should and would comply with all REMIT requirements. The Proposer confirmed this approach for the proposed solution, noting that his expectation is that if a VLP is engaging in forward trades in its role as a party with an energy account then it will be subject to REMIT. As REMIT is not a BSC issue, this does not form any formal legal opinion.

Should a VLP be liable for non-commodity levies?

Summary:

- **No** because levies are calculated using metered volumes and under P415 a VLP participating in the wholesale market won't have any metered volumes allocated (much like a NPT)

In the previous discussions some Workgroup members had expressed concern that non-commodity costs paid by Suppliers and Generators could create a non-level playing field as VLPs who don't pay these costs (as they are not allocated metered volumes) receive an unfair advantage in the wholesale market.

To address the question of whether a VLP would receive a benefit under P415 in this regard, the group considered who currently is liable and why.

National Grid ESO currently recover these from Suppliers and Generators as they have a relationship with all consumers, and charges are based on the end customer paying for their usage of the system, whether they be distribution or generation, with rules defined in the CUSC.

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It was noted that, under P415, VLP activity could conceivably impact the consumption-based TNUoS, DUoS and BSUoS charges. The National Grid ESO representative highlighted that should a VLP not pay any of these charges, network charges are still being incurred by the asset being used. They did not think that this would constitute an impact on the "level playing field" as whatever metered flow an asset produces will incur network charges, so the contract that the VLP would have with that asset would still have to take into consideration any incurred network charges.

The group agreed with this interpretation – whatever happens the customer will have to pay the Network Charges. If VLPs ask them to deviate in a way that changes their network charges, VLPs would have to make it worth their while and present an attractive contractual proposition for them to deviate.

Should a Supplier receive compensation for VLP wholesale market activity?

Summary:

- Is compensation needed? Proposer view – Supplier compensation required

  Alternate view – Supplier could be remunerated through imbalance settlement

Proposer's View

One of the key principles under which the P415 solution was raised was that the Supplier should not benefit nor suffer detriment because of the actions of an Independent Aggregator on site. This is why under the P415 Settlement solution the Suppliers' Imbalance position is adjusted to account for any Independent Aggregator activity (this expands on the arrangements introduced in P344 solution that adjusts Suppliers for balancing activity).

However this still leaves the Supplier commercially impacted in the likely Demand Side Response (DSR) scenario (i.e. the Independent Aggregator reduces demand at a customer's site). In this scenario the Supplier will have bought energy on the wholesale market (that it expected the customer to use) but can't invoice the customer as they haven't used it. As P415 adjusts the Supplier for any VLP activity this means that they won't receive any spill payments for the bought but unused energy.

The Proposer's view is that Supplier compensation is necessary as Suppliers will be left with a cost from the wholesale market they cannot recover in Retail Market due to the imbalance volume adjustment applied by Settlement. Without compensation Suppliers would be participating in the 2holesale market at a disadvantage and therefore compensation will be required to ensure a level playing field within the wholesale market.

The Proposer also noted that the compensation should flow both ways e.g. should the VLP activity result in demand turn up then the Supplier can sell power in the Retail Market it hasn't bought in the wholesale market and should compensate the VLP for costs incurred (i.e. the VLP would have to pay these costs to the customer to incentivise them deviate). In scenarios such as these the VLP is to be compensated for their additional costs by the Supplier.

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Alternate View

A Workgroup member with experience operating as a VLP in Europe gave a presentation to the Workgroup outlining the Clean Energy Package requirements and how this relates to the question of whether Suppliers would need to be compensated under P415 and, if necessary, who should pay.

The Workgroup member noted that under the Clean Energy Package GB settlement is not required to apply an adjustment to the Supplier imbalance volumes for VLP activity. Should an adjustment not be applied then the Supplier would be exposed to cash out price for any VLP activity. In the likely scenario of DSR then the Supplier will be left long and so would be receive remuneration through cash out and so compensation was not necessary. It was noted that some EU countries had taken this approach and was fully viable within the Clean Energy Package structure.

The Clean Energy Package states that: "*Member States may require electricity undertakings […] to pay financial compensation"* (Directive Art 17-4), and that most of all compensation must not create a barrier to entry for Aggregator to participate in the wholesale market: *"Such financial compensation shall not create a barrier to market entry for market participants engaged in aggregation or a barrier to flexibility."*

Workgroup Discussions

Elexon noted the issue of Supplier compensation is open to interpretation within the Clean Energy Package, however there is a clear direction that mechanisms to achieve this must not present a barrier to entry for flexibility.

Noting that Suppliers will likely be left with a cost from the Wholesale Market they cannot recover in Retail Market due to the adjustment considered in the Settlement process when it comes to VLP activity under P415, the group feel that Supplier compensation will be necessary and will be added to the solution principles.

Finally it was noted that further discussion was needed to ensure that the compensation mechanism should not present a barrier to entry for flexibility, factored in to discussions on liability.

Supplier Compensation Volumes

Summary:

- Suppliers shall only be compensated for Deviation Volumes allocated to VLP Wholesale Market trades

The group considered what volumes should be used to calculate Supplier compensation under P415, also considering whether volumes used to calculate Supplier compensation should include balancing and wholesale market volumes (i.e. should the Supplier be compensated for all VLP activity).

Noting that BSC Modification P344 'Project TERRE' did not include Supplier compensation for balancing volumes, the group desire clarity from Elexon on whether the scope of the P415 defect (as captured in the Proposal Form) is sufficient to encompass both Balancing Mechanism and Wholesale market volumes. Elexon's legal opinion that the scope of P415

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is not sufficient to introduce Supplier compensation in the BM, and therefore another Modification would need to be raised to cover this element.

On 1 September 2022 Flexitricity raised P444 'Compensation for Virtual Lead Party actions in the Balancing Mechanism' to run concurrently to P415. Please see the P444 reports for more detail on its solution.

In the absence of P444 (if it is not approved), P415 would need to identify for each SBMU what volumes are to be allocated as Balancing volumes and what volumes are to allocated as Wholesale Market volumes.

Summary of Key Principles

The group agreed the P415 defect and identified a number of high level principles that the P415 Solution should adhere to:

1. Through independent aggregation a VLP shall be able to trade Deviation Volumes on the wholesale market on behalf of their customer(s). These trades shall be captured in the same manner as existing Parties i.e. via Electricity Contract Volume Notifications (ECVN).
2. Deviation Volumes are a measurable commodity that represent an import/export MWh deviation to the Total System as a result of independent aggregation activity by a VLP
3. The VLP shall be the Balancing Responsible Party (BRP) for any wholesale market Deviation Volumes traded. Neither the counterparty nor registered Supplier shall bear any liability for delivery of the trade.
4. The registered Supplier at a site where the customer has chosen to use a VLP independent aggregation service shall receive no direct benefit nor detriment from such a service.
5. VLPs shall have no advantage over existing Trading Parties and be subject to same BSC rules and requirements (where appropriate).
6. Through independent aggregation a VLP shall be able to trade Deviation Volumes in the wholesale market and provide other flexibility services during the same Settlement Period on behalf of their customer(s).

Supplier Compensation Variants and development of an Alternative Solution

Supplier Compensation Liability

Proposer View

In the Proposers view VLPs should be liable to pay for Supplier compensation as they directly benefit from activity at the Supplier's site (i.e. wholesale market trade or exposure to cash out price). If the compensation mechanism is built into the Solution then the additional cost incurred by the VLP (i.e. the Supplier compensation) is forecastable and therefore can be incorporated in to the VLP business model. It was thought by the

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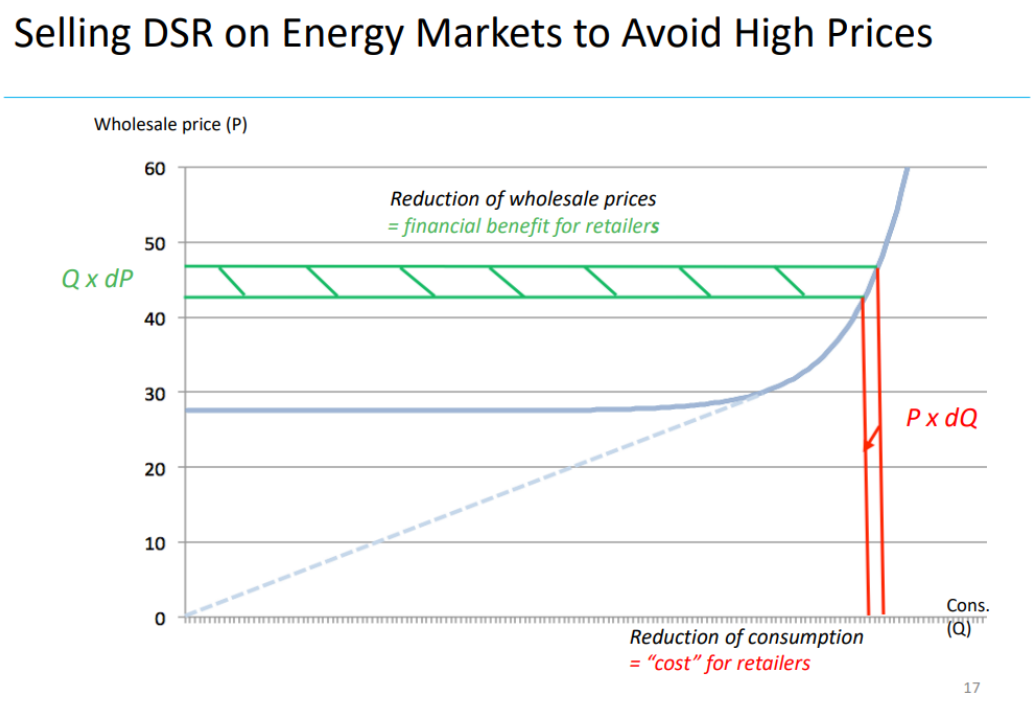
Workgroup that this would be the simplest solution to implement and hence was attractive when considering solution efficiencies and implementation costs.

It was noted however that the additional cost to the VLP (i.e. the Supplier compensation) could be viewed as a barrier to entry, taking into account the compensation price yet to be considered.

Alternate View

An alternate view was that all Suppliers should be liable (i.e. mutualised by market share) as they will all benefit from lower sourcing costs due to flexibility in the wholesale market. Noting that flexibility will only be chosen when at a better price point than traditional generation and so both lowers the system demand for generation and thus the wholesale market price, hence reducing sourcing costs for Suppliers.



The Workgroup discussed whether the Supplier mutualisation of the compensation costs was more compliant with the Clean Energy Package and provided the correct incentivisation for flexibility to act in the wholesale market.

One member believed it to be unfair to state that mutualised compensation creates a cost for all Suppliers without acknowledging that demand response creates a benefit for all Supplier, and that mutualised compensation allows Suppliers to collect a net benefit, rather than only a benefit (as under a scenario where the VLP pays compensation).

Supplier Compensation Price

Summary:

What price should the Supplier be compensated at?

Retail price?	Expensive and difficult to implement

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Imbalance price?	Not appropriate as designed to send market signals to self-balance (or not)
Spot Market price?	Proposer view – Not representative of Supplier incurred costs
	Alternate view – Represents real time value of energy and the overall cost of DSR for suppliers
Approximation of Supplier Sourcing Cost price?	Proposer view – Representative of Supplier incurred costs and adheres to solution principles

Proposer's View on Supplier Compensation Price

In order to compensate the Supplier for actions taken by a VLP a Supplier Compensation Price is needed. The Proposer believes that the Supplier Compensation Reference Price should represent the average Supplier's sourcing costs and be determined in accordance with an industry agreed and governed document or methodology.

The Proposer walked the Workgroup through their view on what would be an appropriate Supplier Compensation price using the table below as an aid:

Supplier compensation scenarios (load reduction)

In each case, considering 1 MWh that's either consumed as expected or curtailed due to DSR dispatch:

	No DR	Corrected and compensated at				
		No Compensation	retail price	sourcing cost	cash-out	day-ahead
MWh DR	0	1	1	1	1	1
Supplier costs	Sourcing Cost S	Sourcing Cost S	Sourcing Cost S	Sourcing Cost S	Sourcing Cost S	Sourcing Cost S
Supplier revenues	Retail R (from customer)	0	Retail R (from VLP)	Sourcing costs S (from VLP)	Imbalance I (from VLP)	Day-ahead D (from VLP)
Supplier profit	= R – S	= 0 – S = – S	= R – S	= S – S = 0	= I – S = ?	= D – S = ?
Impact on supplier (principle 4)	Supplier receives retail margin (Base case)	Supplier makes loss	Supplier keeps retail margin Same as base case	Supplier does not keep retail margin Supplier suffers no loss	Supplier exposed to volatility of imbalance price	Supplier exposed to volatility of day ahead price

Figure 1 - Supplier compensation scenarios

Part of the Workgroup agreed that compensation paid at the retail price would ensure that the Supplier is completely unaffected by VLP activity, while other members considered this approach does not use the appropriate counterfactual and thus does not reflect the actual cost of DSR for suppliers or benefits to them.

It was also noted however that a solution using the retail arrangements of individual sites is not feasible given that Settlement would need to capture large volumes of commercially

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sensitive contracting information. This would place requirements not only on settlement systems to process the information but also on Suppliers to provide it in a timely manner.

The Workgroup unanimously agreed that such a solution would be overly expensive to implement and operate, introduce onerous processes to the market and therefore was undesirable.

The Workgroup considered whether an estimation of the Supplier sourcing costs (i.e. reasonable wholesale trades to balance a Supplier portfolio) would be an appropriate price to apply. The group did note that different Suppliers will have different hedging strategies but felt comfortable that as long as the price used was representative of the average sourcing costs it would suffice to ensure Suppliers do not operate at a disadvantage and ensure the wholesale market remains competitive.

Alternate View

An alternative view was discussed by the Workgroup that the Supplier compensation price should be the day-ahead price (i.e. the spot market price). The argument presented was that should a Supplier be aware of, or learn with experience to anticipate the deviation at site when the trade was submitted (i.e. at H-60 GCT) it would have the opportunity to trade these volumes on the market. By denying the Supplier this opportunity (through imbalance adjustment) the Supplier is due compensation. It was also argued that therefore the real time cost for the suppliers is not the sourcing cost but the spot market price. Prior to the raising of any formal Alternative P415 Solution, the Workgroup wish to consult industry on their level of support for each variant of Supplier compensation being considered by P415

Development of Compensation Variants

As noted previously the P415 Workgroup discussed three potential Supplier compensation mechanisms:

- Compensation 1
  - VLPs (as the Balancing Responsible Party) are liable for compensation costs
  - Compensation paid at a price that represents the average Supplier sourcing costs

- Compensation 2
  - Compensation costs are mutualised across all Suppliers
  - Compensation paid at a price that represents the GB spot market price

- Supplier Compensation 3
  - Compensation costs are mutualised across all Suppliers
  - Compensation paid at a price that represents the average Supplier sourcing costs

Supplier Compensation 1

Under this approach, VLPs are liable to pay for Supplier compensation as they directly benefit from activity at the Supplier's site (i.e. wholesale market trade or exposure to cash out price). If the compensation mechanism is built into the Solution then the additional cost incurred by the VLP (i.e. the Supplier compensation) is forecastable and therefore can be

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incorporated in to the VLP business model. It was thought by a majority of the Workgroup that this would be the simplest solution to implement and hence was attractive when considering solution efficiencies and implementation costs.

Supplier Compensation 2

In an alternate approach, some of the Workgroup believe all Suppliers should be liable to pay for impacted Supplier compensation as all Suppliers benefit from reduced sourcing costs due to VLP activity.

If this compensation mechanism is built into the Solution then the additional cost incurred by the Suppliers shall be based on their market share (calculated using Final Demand)

This alternate view is that the Supplier Compensation Reference Price should represent the real time value of energy, I,e, the spot market price.

Supplier Compensation 3

In this alternate approach, all Suppliers should be liable to pay for impacted Supplier compensation at an estimation of the average Supplier sourcing costs.

The Workgroup sought additional views from the industry via the Assessment Consultation.

Responses to the Assessment Consultation

Do you support Supplier Compensation Method 1 under P415?			
Yes	No	Neutral/No Comment	Other
5	5	1	1

Of those who responded in support of Supplier Compensation 1 (a mix of VLPs and Suppliers), which is the P415 Alternative Solution, they did so on the basis that it is quite simple, gives appropriate economic signals to all parties, avoids Suppliers being left out of pocket, and ensures that each MWh is only paid for once, feeling it fair for the VLP to bear the cost of compensation.

Of those who did not support Compensation 1, arguments stated that it incentivises flexibility providers not to go down the VLP route, and therefore for Suppliers to internalise flexibility, ultimately leading to much lower volumes being deployed. Some respondents stated that the CBA acknowledges that in compensation 1 VLP's net revenues from the wholesale markets may not be enough to justify investment, and that VLPs may have to stack revenues across a wide range of market products to have a business case to invest.

Another respondent who stated 'no' reiterated that they do not support any compensation to Suppliers for the potential losses they may incur due to Demand Side Response activations. However, if compensation to Suppliers must be paid, this respondent stated it should do the least damage possible to the development of Demand Side Response.

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National Grid ESO stated that they do not support any form of compensation, on the basis that financial compensation should not create a barrier to market entry for market participants engaged in aggregation or a barrier to flexibility.

Responses to the Assessment Consultation

Do you support Supplier Compensation Method 2 under P415?			
Yes	No	Neutral/No Comment	Other
4	6	1	0

Of those who responded in support of Supplier Compensation 2, they did so on the basis that Compensation 2 is based on the 'Net Benefit'- all Suppliers benefit from Demand Response participating in the market (thus reducing their sourcing costs) so therefore all Suppliers should also bear their fair share of the costs, so that the net benefits are fairly shared among all Suppliers, and ultimately among all consumers. These respondents believed that Compensation 2 contributes to the development of competitive demand-side alternatives to central system (supply side) assets in the wholesale market, feeling it better supports Demand Side Response in general.

Those who disagreed did so on the basis that Supplier Compensation Method 2 creates potential for distortion, gaming and increased costs for consumers. The P415 Proposer noted that while there may be some benefit to socialising the cost of the compensation payment, it did not make sense to over-compensate the supplier in this way. Several respondents referred to the potential for gaming risks, described in further detail later in this report.

The P415 Proposer stated how, under P344, the Supplier's balancing position is corrected to remove the effect of any VLP's actions. Otherwise, the Supplier would be exposed to cash-out prices for the affected volumes. The principle underlying this is that the Supplier should neither benefit nor suffer due to the VLP's actions: they should be indifferent. Paying them an estimate of their sourcing cost (as in Methods 1 and 3) achieves this: they do not get to supply the MWh they expected, but they're made whole by the compensation payment. Paying them the retail price would have a similar effect. The P415 Proposed argued that paying the Supplier the spot price violates this principle. They argued that it undermines the purpose of correcting the Supplier's balancing position. When the VLP dispatches the customer, the Supplier would unexpectedly find themselves exposed to the spot price. Since dispatches will tend to happen at times of high spot prices, this means the Supplier would typically have a windfall gain. They felt that while it may be appealing to Suppliers to occasionally receive such windfalls, there's no economic justification for doing so, especially as these unnecessary and unpredictable windfalls would be funded via a levy.

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Responses to the Assessment Consultation

Do you support Supplier Compensation Method 3 under P415?			
Yes	No	Neutral/No Comment	Other
4	3	3	1

Those who supported Supplier Compensation 3 (which is now the Proposed Solution) noted that this offers an alteration of Compensation 2 (where compensation is mutualised), with the price paid derived from the Ofgem PCM, to represent the sourcing cost to the Supplier.

Respondents who supported Compensation 3 expressed support for mutualised compensation, however some VLPs who supported Compensation 3 stated that a level of compensation based on long-term average tends to favour larger energy companies, that rely on long-term, secure contracts – to the detriment of smaller Suppliers who more heavily dependent on wholesale prices. The Compensation 3 method would impact them negatively even though this compensation method should be neutral to them.

Those who disagreed with Compensation 3 felt there was no reason to mutualise these costs which arise out of a benefit to the VLP, and did not support compensation methods that spread the cost of compensation across all consumers.

The P415 Proposer responded neutrally on Compensation 3, noting that it is not their preferred approach. As with Method 2, it involves a levy, and could also be argued to over-incentivise the provision of demand response at times when prices are too low for there to be economic benefits. However, unlike Method 2, it does not (in the respondent's view) egregiously over-compensate suppliers, so the levy costs will be smaller. The Proposer did note that if there is a stable consensus that the benefits from the additional participation that could be unlocked by Compensation 3 are sure to outweigh the additional costs of the levy, then this approach could be viable.

One respondent did not have a view on Compensation 3 but noted that if its development required further analysis/consultation that would ultimately lead to delays, they would not support the delays this would cause.

NGESO responded that of all options, this third option seemed the most preferable as the costs to the aggregator would be minimised, therefore maximising the opportunity for demand response to bring benefits to all consumers. Socialising costs across suppliers may involve a transfer from those that can provide flexibility to those who cannot (especially in the early phase of the decarbonisation transition) but the latter will benefit from reduced infra-marginal rent among other benefits like reduced investment in generation infrastructure. NGESO stated that it is crucial that the wider benefits of demand response are considered. What matters, as concluded by FERC, is that there is an overall net benefit for consumers.

Responses to the Assessment Consultation

Do you have a preference for Supplier Compensation Method 1, 2 or 3?			
1	2	3	Other/No comment
5	4	1	1

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A slight majority of respondents expressed a preference for Compensation 1, followed by Compensation, with the reasons given echoing those already provided for the previous questions.

Final Discussions on Compensation Price and Liability

Under the BSC, it is only possible for the Workgroup to bring forward one Alternative Solution to present to the BSC Panel and Ofgem alongside the Proposed solution.

Therefore the Workgroup were invited to consider whether Supplier Compensation 2 or 3 would be preferable for an Alternative, should this solution be agreed by a majority of the Workgroup to be better than the Proposed Solution.

Compensation 2 was discussed and ultimately agreed to be less favourable to a majority of the Workgroup. A minority believe that the day ahead spot price (compensation 2) is the price at which energy is bought (in line with previous discussions and arguments) in particular for small suppliers and that therefore this is the price that best protects those smaller Suppliers. Most of the Workgroup disagreed, believing that this would create a windfall for the Supplier in this scenario, with one member noting that they would be surprised if Ofgem were to support small Suppliers paying for energy at the day ahead price, given that this is what had caused so many to fail in 2021 and was counter to current Ofgem guidance for how they should operate in the market.

Compensation 3 (mutualised, with price paid at the Ofgem Price Cap) was mostly felt to be the best approximation of the retail cost Suppliers would have realistically paid for volumes that would adjusted by a VLP under P415, and would therefore be the closest way to make the Supplier whole without creating a windfall for them.

It was also noted that a potential gaming risk had been identified under Compensation 2, which does not exist under Compensation 3.

Raising an Alternative Solution

As per the defined process in Section F ‘Modification Procedures’, an Alternative solution can only go forward if a majority of the group believe that is better than the proposed.

Ahead of the vote to raise Supplier Compensation 3 as a formal Alternative, Ofgem had explained to the group that their preference was for multiple variants of the P415 Solution (i.e a Proposed and Alternative solution) to be passed through to them to allow them as full a picture as possible when deciding on the Modification.

A Workgroup member raised Compensation 3 as a formal P415 Alternative Solution and the group voted as to whether they agreed it was better than the Proposed Solution, however only a minority agreed that it would be better and therefore this Alternative was not raised.

At this point, the Ofgem representative for P415 reiterated that they would have preferred an Alternative to be raised (though accepting of the restrictions around process regarding the bringing forward of any Alternative) but also clarified for the group that the lack of any alternative options could increase the risk of Send Back or rejection from the Authority, which would ultimately risk delivering P415 to desired timescales.

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The group noted that the failure to raise an Alternative presented a risk in this regard and so, to allow for an Alternative solution that met the process requirements for the Alternative to be better supported by a majority of the Workgroup than the Proposed, the P415 Proposer states that they would like to “switch” the Proposed Solution so that the Proposed Solution becomes Compensation 3 (compensation is mutualised with price paid at approximation of sourcing cost) and the group would then vote to raise Compensation 1 (VLP pays compensation at approximation of sourcing cost) as the P415 Alternative Solution.

This vote proceeded and a majority of the group voted that they believe the now-Alternative (Compensation 1) to be better than the now-Proposed (Compensation 3) and thus enable the presentation of both these options to the BSC Panel and Ofgem and reduce the risk of any further delay.

Supplier Compensation Price Methodology

Elexon’s initial proposal for calculation of a Supplier Compensation Reference Price for the Proposer’s solution where the VLP pays compensation was based on the Baseload Reference Price that EMRS use in the Capacity Market, also explaining that this was not intended to try and capture ever different Supplier’s hedging strategy (this would not be possible or proportionate as they are all different), but rather trying to capture the average cost of electricity in a future period.

Several members expressed a desire for the methodology to account for Supplier’s shaping costs, feeling that a Baseload product that is flattened out across a given length of time will fail to account for these costs.

Some members of the Workgroup noted that Ofgem’s Price Cap Methodology (PCM) accounts for these shaping costs and wondered whether this would be more suitable to explore as a starting point for the Supplier Compensation Reference Price methodology.

Elexon noted that this would add considerably more complexity and that in the end the benefits would have to be considered against the costs, but noted the Workgroup desire to examine the PCM in more detail as an existing process that takes into account many of the questions that the Workgroup raised on costs, defined periods and peak/off peak prices.

For avoidance of doubt, the proposal is not to tie P415 directly and permanently to the PCM, which was designed to be temporary, but to use its methodology as a starting point. Additionally, the PCM has several sections and the P415 Workgroup propose to only examine aspects of the PCM that is applicable to the wholesale market.

The P415 Proposer reaffirmed that they had no fixed view on the level of complexity in the calculation methodology, but considered that the PCM could have merit and did not violate the principle of P415 capturing a reasonable approximation of the cost that a Supplier probably incurred, that they won’t be able to recover from the bill, and so not leave them significantly out of pocket or, conversely, with a windfall.

Ultimately, it was agreed and the PCM could form a good starting point for further discussion and examination, to potentially be mirrored and/or simplified for incorporation into P415.

The group also considered whether a bifurcation in the methodology would be necessary to account for both residential and commercial/industrial load. The Workgroup generally

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felt that this would be preferable but noted that it was less clear how to implement this, discussing the potential use of LLFCs and look up tables to identify domestic and non-domestic consumers.

Elexon advised the group to aim for simplicity in the first instance and then look to iterate at a future point. One option could be to launch P415 with one methodology that is broadly representative of commercial costs for Suppliers, then look to introduce more as required in a similar manner to the approach taken for P376.

Responses to the Assessment Consultation

The Workgroup believe that Ofgem's Price Cap Methodology should be used to calculate the Supplier Compensation Reference Price representing the average Supplier's sourcing costs, do you agree? Is there another method that you believe may be more appropriate?			
Yes	No	Neutral/No Comment	Other
5	5	1	1

Respondents who agreed believed this to be a reasonable estimate of Supplier costs. Several felt that whilst Ofgem's Price Cap Methodology is not perfect, it is the best available option that can be easily implemented and that captures most of the costs incurred by Suppliers.

Several respondents who replied 'no' stated that using a Supplier average sourcing cost would favour larger suppliers to the detriment of smaller energy Suppliers, with financial impacts which could limit the level of competition amongst GB suppliers, to the detriment of end consumers. This was challenged by a Workgroup member who did not understand this logic, as that would imply that the Price Cap is unfair to smaller Suppliers, which they felt was clearly not the case as, otherwise, the government wouldn't have implemented it.

In general, there were few suggestions for better methodologies, although one respondent suggested using the System price System Sell & System Buy Prices | BMRS (bmreports.com[1]) would be more accurate. Workgroup members noted that using System Buy and Sell price would be even more extreme than using the day-ahead price and noted that this would be more appropriate in a world where P415 left Supplier's uncorrected but, since that it not the case, did not support the adoption of this method, believing the PCM to be an appropriate and proportionate approximation of Supplier's sourcing costs.

Workgroup Discussion on the CBA

CEPA was asked to perform a CBA of P415 to provide information to the BSC Panel, P415 Proposer and P415 Workgroup on the potential benefits, costs and other impacts of implementing P415.

As well as considering the merits of P415 relative to the counterfactual in which P415 is not implemented, the CBA was intended to support comparison of compensation variants to evaluate how the costs and benefits are impacted by each design.

[1] https://www.bmreports.com/bmrs/?q=balancing/systemsellbuyprices

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Please note that at the time the CBA was undertaken, only Compensation 1 and 2 had been developed by the Workgroup. Therefore specific analysis of Compensation 3 (which shares the mutualisation aspect with Compensation 2 but differs from Compensation 2 in that the cost of compensation is derived from a Supplier's approximate sourcing cost, rather than the day ahead spot price) was not possible.

Some Workgroup members considered that, because CEPA had chosen not to take an endogenous approach (i.e determining its relationship with other variables within the model) to the total volume of Demand Response delivered that would show higher total levels of demand response delivered under Compensation 2 than Compensation 1, the CBA compared the variants assuming that the volumes would be the same. One member felt that this was not a full CBA as it didn't consistently account for the likelihood of more volumes under Compensation 2 or endogenously input compensation revenues. Therefore the member believed that the CBA only justifies whether P415 should be implemented or not (noting that regardless of the compensation route the outcome was positive for having P415) but is not relevant to choosing between Compensation Method 1 and Method 2. Some Workgroup members agreed and note that caveats to any CBA outcomes between Compensation Method 1 and Method 2 should be made clear.

The Proposer did not agree, believing that the CBA had modelled both variants so that a comparison between them could be made. Another member agreed, noting that any endogenous approach would also have to model not just capacity revenues but balancing revenues, possible distribution balancing revenues, ancillary revenues, such that so many inputs would have had to enter the modelling to make it near impossible. This member felt that it remained a matter of opinion whether the CBA could be used as a comparator but, given the length and amount of effort put into it, it would seem imprudent not to use it as such. The BSC Panel were content with the CBA methodology.

Responses to the Assessment Consultation

Having considered the findings of the P415 Final CBA Report in Attachment C, do you believe the benefits of implementing P415 will outweigh the costs?			
Yes	No	Neutral/No Comment	Other
5	1	2	4

Most respondents agreed that they believe the benefits of implementing P415 will outweigh the costs, with some respondents stating that they believe the costs will be trivial compared to the substantial additional value stream that will lead to greater participation from existing customers and attract participation by many more customers.

Several VLP respondents noted that the upfront implementation could outweigh benefits if P415 delivers only very small amounts of additional flexibility, believing that mutualised compensation under Compensation 2 and 3 promoted wider utilisation of flexibility to avoid this scenario.

P415 risks and unintended consequences

In the CBA Report CEPA considered the position of a Supplier when a VLP makes use of flexibility of one of its customers under the set of assumptions that CEPA set out. CEPA found that:

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- Under Compensation Method 1, Suppliers would be net neutral when VLPs deploy peak reduction flexibility and would benefit by 'Sourcing Cost – Spot Price (t')' when VLPs deploy load shifting flexibility.
- Under Compensation Method 2, Suppliers would benefit by 'Spot Price – Sourcing Cost' when VLPs deploy peak reduction flexibility and would benefit by 'Spot Price (t) – Spot Price (t')' when VLPs deploy load shifting flexibility.

This raises a question regarding the incentives of a supplier to become a VLP in order to make use of flexibility from its own customer and whether it could do so without providing any additional system benefit compared to deploying that flexibility as a supplier.

Under Compensation Method 1, targeting of the compensation cost at the VLP means that the supplier would face a cost when it acts as a VLP to make use of flexibility from its own customer.

- Further to the position summarised above, acting as a VLP, the supplier would also have to pay the Sourcing Cost by way of compensation.
- Therefore, there does not appear to be any benefit to the supplier from deploying flexibility from its own energy customers as a VLP.

However, under Compensation Method 2, CEPA found that a gaming risk may exist. A supplier who deploys flexibility of its own customer as a VLP would benefit as summarised above. The supplier would only face a small fraction of the overall costs of compensation as these compensation costs are socialised.

- The supplier effectively benefits twice under such an arrangement.
- It benefits from making use of its customer's flexibility as a supplier. However, it also benefits from the receipt of compensation without being liable for an equivalent payment of compensation.

It was not clear to CEPA whether there are mechanisms in place within the arrangements for a VLP to prevent suppliers from acting as VLPs for their own customers. If there are no mechanisms to prevent such behaviour, this could present an important source of gaming risk.

The Workgroup considered this potential risk and discussed any potential mechanisms that might mitigate this risk.

Some members considered that Compensation Method 2 could introduce an incentive for a Supplier to change their behaviour and maximise windfalls, even in times where it doesn't make any sense to dispatch. If compensation is socialised and there is a relationship between the Supplier and the VLP (e.g. same Party) then it distorts incentives (they would get revenue from the dispatch and the compensation) and potentially create a non-level playing field, introducing a regulatory risk.

Other members disagree that there is a material risk, noting that mechanisms exist in other markets to identify this sort of activity, and that those "gaming the system" would expose themselves to so much risk and regulatory punishment that it would disencentivise this behaviour, not seeing this as a material issue.

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Worked Example of Gaming Risk

Elexon agreed to work up an example to better illustrate the interactions at play, including different examples or a couple of scenarios to see help illustrate what the numbers look like, showing the net flow of money:

Hypothesis: under Compensation Method 2 the Supplier impacted by a VLP action will generally be over compensated due to the day ahead price being higher than the sourcing cost. This is at the expense of all of the other Suppliers.

In a scenario where the VLP and Supplier are working together, this additional margin can be taken into account when deciding on what offer prices to use. This could lead to an offer at an artificially low price, less than what is required to pay the customer, but still be profitable due to the over compensation from the day ahead price.

Ultimately this may lead to customers taking expensive actions that aren't justified by the wholesale price, paid for by the other Suppliers. Creating a non-level playing field for VLP and Supplier partnerships offering customers artificially attractive terms.

Scenario one: Independent parties and acceptable market conditions

Spot price = 80

VLP costs = 10

Lost supplier revenue = 30

Price offered for VLP to take action = 40

Final demand share = negligible

	VLP	Supplier	Customer	All suppliers
Business costs of VLP taking an action	-10	0	10	0
Payment for VLP taking action	40	0	0	0
Loss of revenue for supplier	0	-30	0	0
Compensation	0	80 - final demand share	0	-80 + final demand share
Total	**30**	**50 - final demand share**	**10**	**-80 + final demand share**

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Scenario two: Non Independent parties and acceptable market conditions

Spot price = 80

VLP costs = 10

Lost supplier revenue = 30

Price offered for VLP to take action = 40

Final demand share = negligible

	VLP A	Supplier A	Customer	All other suppliers
Business costs of VLP taking an action	-10	0	10	0
Payment for VLP taking action	40	0	0	0
Loss of revenue for supplier	0	-30	0	0
Compensation	0	80 - final demand share	0	-80 + final demand share
Total	**30**	**50 - final demand share**	**10**	**-80 + final demand share**

A BAU scenario and coincidental that the VLP and supplier are non-independent.

Scenario three: Independent parties and non-acceptable market conditions

Spot price = 80

VLP costs = 50

Lost supplier revenue = 30

Price offered for VLP to take action = 20

Final demand share = negligible

	VLP	Supplier	Customer	All suppliers

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Business costs of VLP taking an action	-50	0	50	0
Payment for VLP taking action	20	0	0	0
Loss of revenue for supplier	0	-30	0	0
Compensation	0	80 - final demand share	0	-80 + final demand share
Total	**-30**	**50 - final demand share**	**50**	**-80 + final demand share**

The VLP would lose out in this scenario, so no action should be taken.

Scenario four: Non Independent parties and non-acceptable market conditions

Spot price = 80

VLP costs = 50

Lost supplier revenue = 30

Price offered for VLP to take action = 20

Final demand share = negligible

	VLP A	Supplier A	Customer	All other suppliers
Business costs of VLP taking an action	-50	0	50	0
Payment for VLP taking action	20	0	0	0
Loss of revenue for supplier	0	-30	0	0
Compensation	0	80 - final demand share	0	-80 + final demand share

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Total	**-30**	**50 - final demand share**	**50**	**-80 + final demand share**

When the VLP would normally make a loss, by working with the Supplier it can still take an unfavourable action and make a profit at the expense of all other suppliers.

Responses to the Assessment Consultation

Do you consider there to be a material gaming risk under Supplier Compensation 2?			
Yes	**No**	**Neutral/No Comment**	**Other**
6	5	1	0

Respondent's views differed on whether they considered there to be a material gaming risk under Supplier Compensation Method 2. Those who responded 'yes' noted that CEPA had identified this potential gaming risk with Supplier Compensation Method 2.

The P415 Proposer reiterated that under both Compensation 2 and Compensation 3 the dispatched energy gets paid for twice: once in the wholesale market and once through the socialised compensation. Under Compensation 3, the compensation price will not be high enough to provide much benefit in the envisioned gaming scenario, but under Compensation 2, it could be very high indeed. This could be exploited either by the supplier and VLP being the same party, or through some informal cooperation between them.

On the question of whether this would be material, one respondent stated that given the infancy of the dual supplier-VLP relationship they believe this could evolve into a material risk.

NGESO stated that they believe that the introduction of supplier compensation would give rise to an increased likelihood of gaming.

A slight minority disagreed, as VLPs will have to prove that they have delivered demand response. P415 relies on P376's robust baseline, which has been approved for the Balance Mechanism and is also used for some local flexibility products.

Some stated that, in its gaming risk assessment, CEPA did not mention the fact that VLPs are responsible for their imbalances and will be penalised if they fail to deliver on the baseline. It was argued that, as proven by P376, baseline evidence can be defined effectively, quashing the risk.

The Workgroup noted the mixed responses to this question of risk and were ultimately unable to come to a consensus around this point. Some members believe there may be a risk, some believe this is immaterial and may be covered under existing arrangements or protections around insider trading.

Ultimately, the Workgroup are happy to pass these discussions to Ofgem for their consideration, noting that as Compensation 2 has not been brought forward as an Alternative Solution, this reduces the need to consider these discussions further as part of P415.

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Non-delivery calculation

Summary:

- No change needed

The non-delivery calculation identifies, per Settlement Period, whether a BM Unit has delivered against the balancing actions it has received and whether it has benefitted from that non-delivery.

To do so it compares a BMU Expected Metered Volume (QME) against the actual BM Unit Metered Volumes, and then compares the price the Party will be paid (i.e. Acceptance Price) against the price the party will be charged for non-delivery (Imbalance Price).

It was highlighted to the group that under the current arrangements the BM Unit Expected Metered Volume (QME) only takes into account FPN and balancing volumes (i.e. for SBMU it won't take into account any WM activity).

QME = FPN + QBS

Where FPN = the physical position of the BMU for a particular settlement period

QBS = balancing volumes

Non-delivery in the Wholesale Market (i.e. an imbalance volume) is calculated at the account level and incorporate WM volumes in BM non-delivery would require knowing the VLP's wholesale position at the SBMU level.

The VLPs in the group were asked whether providing a BM Unit view of WM activity (or intended WM activity) would be an onerous requirement. One Workgroup member stated that this would undermine aggregation by "disaggregating the aggregator" and was uncomfortable with this approach, but would support a solution of aggregating actions at an account level and where there's non delivery, paying the highest price within those aggregated volumes. This would only apply in cases where several units in several zones are activated.

At present the Workgroup do not see a need for these changes and are happy that the BOA will be given priority within the balancing volumes and happy that the incentive to deliver their volumes within the Balancing Mechanism/WM will be the imbalance cash out price.

Credit Arrangements

Summary:

- Option 1 'VLPs lodge cover for an estimate of their net exposure' chosen

The group considered 3 options for VLP Credit Arrangements under the P415 solution.

Under Option 1 VLPs would lodge cover for an estimate of their net exposure, this was felt to best uphold principle 5 'the VLP shall be subject to same rules and requirements where appropriate' and represents (of all the options) the best estimate of debt to be accrued.

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Under Option 2 VLPs would have to lodge cover for all contracted volumes. This would be easy to implement but would result in an increase of credit cover needed to be lodged and could be considered a barrier to entry for VLPs.

Under Option 3, the Credit Energy Indebtedness value would be set to zero and therefore result in a reduction of credit cover needed to be lodged. The group did not consider this to be appropriate as in case of VLP default the market shall be liable for any missing credit cover and liability for debt accrued would be placed on other market participants.

Therefore the group unanimously agreed and determined that Option 1 is the preferred P415 Credit Assessment Energy Indebtedness (CEI) solution for P415.

Reporting and customer consent

Summary:

- No changes are proposed for Supplier reporting of VLP activity

The group noted that Ofgem have previously expressed the view that the customer consent model (whereby the customer must consent to the relevant supplier receiving granular data) is preferable to mandatory sharing (whereby customer consent would not be required for suppliers to receive this data) via their decision on P344 'Project TERRE'. This is consistent with a decision on a very similar issue of data sharing for P354 (specifically ABSVD MSID data).

Having considered this information, the group thought would not be prudent to go against Ofgem's previous decision by including mandatory information sharing as a feature of P415.

A majority of the Workgroup agreed that correction and compensation under P415 means that Suppliers would not be impacted by VLP activity and therefore have less need for individual site-level data, although a Supplier representative disagreed that this would not be useful or desired for these organisation. Therefore no changes are proposed for Supplier reporting of VLP activity (to clarify reporting will not distinguish between VLP BM and WM volumes).

While the group agreed to move forward with solution that aligns to previous Ofgem judgements on P344 (i.e. no mandatory sharing of information between the VLP and Supplier) some members wished to highlight concerns on the Supply side that, under this model, costs allocated to customers on an individual basis (in particular any pass-through tariffs or in cases where customers are on different contracts) would be difficult to identify and allocate correctly.

The Workgroup were happy for these concerns to be recorded as part of the final report, though it was pointed out that any further Workgroup decisions around this point would be in danger of breaching Supplier's commercial contracts. Additionally, it was noted that under P415 Suppliers would be free to include customer consent as part of a contract with any customer as this solution doesn't prevent it, but merely does not mandate it within the BSC.

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Workgroup discussions on Implementation

P415 is a Modification that will introduce a new player into the WM, with wide ranging impacts on the BSC and its central systems in order to facilitate.

In December 2022 a Workgroup member raised the greater need for additional Demand Response due to the ongoing war in Ukraine and the potential for scarcity over the winter period, and wondered whether anything could be done to expedite P415, in light of recent moves toward aggregators to be able to activate their services right away.

The Workgroup were sympathetic, but it was noted that the P415 Solution features a large system change as a limiting factor, it wasn't otherwise obvious to the group how you can get around that lead time to meaningfully speed up implementation.

One member noted that the only way forward they could see would be to put pressure on Ofgem to make a timely decision on P415.

It was noted that NGESO had implemented Demand Side Flexibility at considerable speed this winter so alternative solutions outside P415 would likely be possible to address any urgent requirements.

Further engagement with National Grid ESO following the Assessment Consultation

Early in development of P415, the Workgroup asked NGESO if they would need visibility of what VLPs intend to physically deliver in the wholesale market (i.e. the equivalent of a FPN) to help them balance the system and whether they would be satisfied that issued balancing actions would be sufficiently incentivised under the P415 solution. The NGESO representative agreed to take this away for internal discussion.

Later in the process as part of their response to the Assessment Procedure Consultation, National Grid ESO highlighted several concerns over the data they would receive under P415 and highlighted issues that they felt would arise from the application of Supplier compensation which may cause distortions and inefficiencies.

Elexon, National Grid ESO and several P415 members met to work through their feedback to help ESO with additional data and managing risk.

NGESO described an identified gap - currently all info goes to ESO in form of a Physical Notification (PN). If VLP changes behaviour, ESO will notified of that behaviour via the PN but they will not know part of the PN is moving and so won't know what part of the PN to offset against the Supplier data to include in their national forecast. In order to make sure the ESO doesn't have information problems from these Modifications, they would like to know from VLPs in advance what their anticipated Deviation Volumes (DV) are.

A proposed way forward was developed to adjust the P415 solution so that VLPs send forecasted deviation volumes to ESO.

Changing the PN structure would be impactful and difficult but Elexon suggested to use a parallel process as this would be more quick and efficient to implement and ultimately not present a risk to overall delivery of this Modification to current timescales.

A new high level requirement for VLPs to let ESO know a day ahead, with intraday updates, what they expect their DV to be was identified, and the VLPs on the call were provisionally comfortable with this high-level requirement.

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At the final P415 Workgroup, Elexon explained these suggestions to the Workgroup, and the Workgroup were comfortable with the addition of this high-level requirement to the P415 Solution, noting further detail on processes, data formats and interfaces will be developed later, during implementation phase should P415 be approved.

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7 Workgroup's Conclusions

The Workgroup provided its views on both the P415 Proposed and Alternative Modifications against the Applicable BSC Objectives.

The **majority** of the Workgroup believes that P415 **Alternative** Modification would overall better facilitate the Applicable BSC Objectives compared with both the existing baseline and Proposed Modification and so should be approved.

Members' views against each of the Applicable BSC Objectives are summarised below:

Does the P415 Proposed Solution better facilitate the Applicable BSC Objectives?		
Obj	Proposer's Views	Other Workgroup Members' Views[2]
(a)	• Neutral	• Neutral (Unanimous)
(b)	• **Positive**	• **Positive (Majority)**
(c)	• **Positive**	• **Negative (Majority)**
(d)	• Neutral	• Neutral (Unanimous)
(e)	• Neutral	• Neutral (Unanimous)
(f)	• Neutral	• Neutral (Unanimous)
(g)	• Neutral	• Neutral (Unanimous)

Proposed Solution

The Proposer believes that the Proposed Solution better facilitates BSC Objectives (b) and (c) and is better against the overall BSC baseline (the status quo). As described previously, the Proposer prefers the Alternative Solution.

A majority of Workgroup members believe that the P415 Proposed Solution is positive against objective (c) but detrimental against (d) and detrimental against the overall BSC baseline.

Objective (b) - The efficient, economic and co-ordinated operation of the National Electricity Transmission System

As with the Alternative Solution, the Proposer believes the additional revenue stream for demand-side flexibility should lead to more demand-side participation in flexibility in general, including the Balancing Mechanism and other balancing services needed to operate the National Electricity Transmission System. This should lead to greater competition to provide those services, allowing more efficient, economic operation of the system – a positive impact on Objective (b).

The Proposer believes that the Alternative better facilitates this objective than the Proposed, but that the Proposed still offers benefits on this point when compared to the status quo.

[2] Shows the different views expressed by the other Workgroup members – not all members necessarily agree with all of these views.

What are the Applicable BSC Objectives?

(a) The efficient discharge by the Transmission Company of the obligations imposed upon it by the Transmission Licence

(b) The efficient, economic and co-ordinated operation of the National Electricity Transmission System

(c) Promoting effective competition in the generation and supply of electricity and (so far as consistent therewith) promoting such competition in the sale and purchase of electricity

(d) promoting efficiency in the implementation and administration of the balancing and settlement arrangements

(e) Compliance with the Electricity Regulation and any relevant legally binding decision of the European Commission and/or the Agency [for the Co-operation of Energy Regulators]

(f) Implementing and administrating the arrangements for the operation of contracts for difference and arrangements that facilitate the operation of a capacity market pursuant to EMR legislation

(g) Compliance with the Transmission Losses Principle

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A majority of Workgroup **agree** with this assessment. A minority believe that the Proposed Solution will not unlock enough flexibility to make a material difference to objective (b).

Objective (c) - Promoting effective competition in the generation and supply of electricity and (so far as consistent therewith) promoting such competition in the sale and purchase of electricity

The Proposer believes that the P415 Alternative Solution will create wider market access to the wholesale market, allow more customer loads to participate, increasing the level of competition and thereby facilitating objective (c).

The Proposer believes that the Alternative Solution better facilitates this objective than the Proposed, but that the Proposed Solution still offers benefits on this point when compared to the status quo.

Only a **minority** of the Workgroup agree with this point (for the reasons given above). The **majority** who disagreed maintain concerns about the impact the Proposed Solution could have on competition on the Supply side - by mutualising a risk that Suppliers can't manage, then putting the cost of that risk onto Suppliers to pay for – and therefore believe the Proposed solution is detrimental to competition.

Does the P415 Alternative Solution better facilitate the Applicable BSC Objectives?		
Obj	Proposer's Views	Other Workgroup Members' Views
(a)	• Neutral	• Neutral
(b)	• **Positive**	• **Positive (Unanimous)**
(c)	• **Positive**	• **Positive (Majority)**
(d)	• Neutral	• Neutral
(e)	• Neutral	• Neutral
(f)	• Neutral	• Neutral
(g)	• Neutral	• Neutral

Alternative Solution

A **majority** of the Workgroup believe that the Alternative Solution better facilitates BSC Objectives (b) and (c) and is better against the overall BSC baseline (the status quo).

The P415 Proposer, as described above, aligns to this view and prefers the Alternative Solution.

Objective (b) - The efficient, economic and co-ordinated operation of the National Electricity Transmission System

The Workgroup members **unanimously** believe that objective (b) is better facilitated by the Alternative Solution, for the same reasons as given for the Proposed Solution.

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Objective (c) - Promoting effective competition in the generation and supply of electricity and (so far as consistent therewith) promoting such competition in the sale and purchase of electricity

A **majority** of Workgroup members believe that the Alternative solution is better against objective (c) by creating wider market access to the wholesale market. Some members who considered the Proposed to be detrimental against (c) did share the same concern about competition as with the proposed, due to the lack of mutualisation in the Alternative Solution's compensation mechanism.

One member who disagreed did so on the basis that they did not think the Alternative would unlock enough Demand Side Response to better facilitate competition. Another member who disagreed did so on the basis that they did not support any form of compensation and felt this would harm competition.

Which solution should be approved?

For the reasons given above, the majority of the Workgroup (including the P415 Proposer) believe that the P415 **Alternative Modification** would overall better facilitate the Applicable BSC Objectives compared with both the existing baseline and Proposed Modification and so should be **approved**.

Responses to the Assessment Consultation

Do you agree with the Workgroup's initial unanimous view that P415 does better facilitate the Applicable BSC Objectives than the current baseline?			
Yes	No	Neutral/No Comment	Other
8	2	1	1

A majority agreed that Objective (b) would be better facilitated, on the basis that removing market barriers for demand side flexibility in the wholesale market will likely incentivise better participation in local and national balancing services. Additionally, a majority agreed that Objective (c) would be positively impacted as enhanced competition and liquidity, facilitated by a wider pool of participants, would positively facilitate competition.

Of respondents who disagreed, one accepted the rationale for the view that reform is needed to convince policy makers to enable VLPs to draw on DSR for sale in the wholesale electricity market. However this person was unconvinced that there is really a need to compensate Suppliers for their potential losses related to DSR activated by independent aggregators, arguing that, without compensation, Suppliers will learn quickly how to manage their day ahead risks associated with demand response.

One Supplier also disagreed, do not believe P415 achieves this in an efficient way. In this respondent's view, P415 introduces complexity and risk of consumer harm for an unquantified and non-specific benefit.

National Grid ESO also provided a response stating that against objective (b) they did not agree that P415 is better than the current baseline. Following subsequent engagement and discussion, NGESO revised this assessment to state that they felt both the Proposed and Alternative Solutions were positive against (b) during the gathering of final views, as described above.

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8 Panel's Initial Discussions

The P415 Assessment Report was presented to the Panel at its meeting on 13 April 2023 (337/05). The Panel progressed the Modification to the Report Phase.

Initial Recommendations

The Panel **unanimously** agreed that the P415 Proposed Solution **does** better facilitate Applicable BSC Objective (b) and that it **does not** better facilitate Applicable BSC Objective (c) (with a majority believing it to be neutral against this objective).

The Panel **unanimously** agreed that the P415 Alternative Solution does better facilitate Applicable BSC Objective (b) and (c).

A **majority** of Panel members agreed that the P415 Alternative Modification is better than the P415 Proposed Modification and that the Alternative Solution should be approved (with the Proposed Solution rejected).

A minority of members disagree and believe that the P415 Proposed Modification is better than the P415 Alternative Modification, on the basis that it is expected to reduce barriers to entry for VLP participation in the provision of further demand side response.

The Panel **unanimously:**

- agreed that P415 should not be treated as a Self-Governance Modification;
- agreed that P415 does impact the EBGL Article 18 Terms and Conditions;
- agreed the Implementation Date;
- agreed the legal text; and
- agreed that P415 should be submitted to the Report Phase.

Initial Discussions

A Panel member wanted to clarify that, according to the findings of the Cost Benefit Analysis, the total welfare under the Proposed Solution (VLP pays compensation) was found to be lower, with a significantly lower surplus paid to the VLP when they are liable to pay compensation. This led this Panel member to conclude that there would be little to no uptake under the Proposed Solution, if the outcomes of the CBA are to be accepted, as there would not be enough value to the VLP.

Another Panel member who was a P415 Workgroup member clarified that the P415 Proposer was a VLP themselves and strongly supported the VLP paying compensation, on the basis that this seemed the fairest way to apply compensation despite the differences in total welfare predicted in the market.

The Panel noted the wider concerns that some Suppliers had - described in Section 6 'Workgroup discussions' - regarding the lack of mandatory information sharing between VLPS and Suppliers under P415 and any potential risk due to activities that were outside Supplier's control. It was clarified that advance information sharing was minimised to avoid wider concerns over competition that would arise under any mandatory sharing of information by a VLP to a Supplier.

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A Panel member also wanted to confirm that Ofgem were comfortable with the timescales for decision making and would have all the information necessary to avoid a delay or send back. Elexon commented that the Ofgem rep had confirmed in the last Workgroup that they intended to be able to make a decision to support the P415 timescales and had already engaged the Workgroup on additional information to avoid a send back (communicating a desire for multiple variants of the solution) but clarified that they would continue to engage Ofgem and support them in this regard.

The Panel queried whether anything could be done to bring forward the Implementation Date of P415, one year from the point of approval by Ofgem, but acknowledged that the complexity of interactions between the various BSC systems requiring amendment to deliver P415 made it extremely challenging to bring this date forward any more. Elexon also clarified that there was no significant implementation impact difference between the Proposed and Alternative solutions that would mean that one was quicker to implement than the other in this regard.

A Panel member considered the symmetrical nature of P415 and asked whether the Workgroup had considered a scenario whereby a VLP buys power at a price lower than the retail price on the WM but is then compensated by the Supplier at a higher retail price, resulting in a transfer to the VLP. It was clarified that, while the Workgroup had not considered that exact scenario (the focus of P415 had been on keeping the Supplier whole so that they were not disadvantaged by actions taken by the VLP), both the P415 solutions propose payment of compensation at an approximation of sourcing cost rather than at retail cost, which while acknowledging there was unlikely to ever be a perfect price to represent this, allayed concerns as it most closely aligns with the wholesale price that the Supplier would expect to pay.

Report Phase Consultation Questions
Do you agree with the Panel's initial majority recommendation that the P415 Alternative solution should be approved? *Please provide your rationale with reference to the Applicable BSC Objectives.*
Do you agree with the Panel's initial view that P415 should not be treated as a Self-Governance Modification? *Please provide your rationale.*
Do you agree with the Panel's initial consideration that P415 does impact the European Electricity Balancing Guideline (EBGL) Article 18 terms and conditions held within the BSC? *Please provide your rationale.*
Do you have any comments on the impact of P415 on the EBGL objectives? *Please provide your rationale.*
The Panel invites you to give your views using the response form in Attachment E

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9 Recommendations

The BSC Panel initially recommends to the Authority:

- That the P415 Alternative Modification should be **approved** and that the P415 Proposed Modification should be **rejected**;
- That P415 **does** impact the EBGL Article 18 terms and conditions held within the BSC;
- That P415 is positive and consistent with the EBGL objectives;
- An Implementation Date for the P415 Proposed Modification of:
    - 7 November 2024 and part of the Standard November 2024 BSC Release if a decision is received on or before 6 October 2023;
- An Implementation Date for the P415 Alternative Modification of:
    - 7 November 2024 and part of the Standard November 2024 BSC Release if a decision is received on or before 6 October 2023;
- The draft BSC legal text for the P415 Proposed Modification; and
- The draft BSC legal text for the P415 Alternative Modification.

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Appendix 1: Workgroup Details

Workgroup's Terms of Reference

Specific areas set by the BSC Panel in the P415 Terms of Reference	Conclusion
Whether a new Trading Party Role is needed for VLPs using P415 (or whether one of the existing Roles is suitable e.g. Non Physical Trader)	Yes, details in the solution
Whether the BSC should include a mechanism for compensating Suppliers for adjustments to their imbalance position (and, if so, the appropriate price)	Yes, several variants are being explored
Consideration of commercial impacts on Supplier business models;	Compensation should cover Suppliers for VLP actions. There will be risks to forecasting and hedging with greater load shifting activities, but CBA say these are coming regardless of P415 when more flexibility is around
Consideration of interactions with licensing around physical trading versus non-physical trading	Out of scope for P415, a consideration for Ofgem
Can power be bought at the site through P415 and if so, who pays the third party charges/BSUoS charges	No
Will VLP's be able to set their Final Physical Notifications (FPNs) to 'No' if P415 is implemented	FPNs still required
Consider models using just operational metering and models using baselining with operational metering	Baselining considered to be the best method
How will P415 impact the BSC Settlement Risks	No direct impact to Settlement risks, but emerging risks will be tracked

Assessment Procedure timetable

P415 Assessment Timetable	
Event	Date
Panel submits P415 to Assessment Procedure	11 October 2020
Workgroup Meeting 1	11 December 20
Workgroup Meeting 2	9 February 2021
Workgroup Meeting 3	25 March 2021
Workgroup Meeting 4	27 May 2021
Workgroup Meeting 5	13 July 2021

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P415 Assessment Timetable	
Event	Date
Workgroup Meeting 6	3 September 2021
Workgroup Meeting 7	28 October 2021
Workgroup Meeting 8	10 December 2021
Workgroup Meeting 9	1 February 2022
Workgroup Meeting 10	22 February 2022
Call for Evidence for P415 to inform cost-benefit analysis	9 April – 9 May 22
Workgroup Meeting 11	30 May
Workgroup Meeting 12	1 July
Workgroup Meeting 13	22 August 22
Workgroup Meeting 14	7 October 22
Workgroup Meeting 15	7 December 22
Assessment Procedure Consultation	January - February 2023
Workgroup Meeting 16	28 February 2023
Workgroup Meeting 17	28 March 2023
Panel considers Workgroup's Assessment Report	By April 2023

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