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ELEXON

P415 'FACILITATING ACCESS TO WHOLESALE MARKETS FOR FLEXIBILITY DISPATCHED BY VLPS'

DRAFT Solution Summary

Public

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Contents

About this document

This document contains the P415 Workgroup proposed solution for Balancing and Settlement Code (BSC) Modification P415 'Facilitating access to wholesale markets for flexibility dispatched by VLPs'.

The purpose of this document is to formally catalogue the solution requirements that ELEXON has drafted pursuant to the P415 Workgroup's discussions as of its tenth meetings between December 2020 and May 2022.

Background

P415 seeks to amend the BSC to allow Virtual Lead Parties (VLP) to participate in the GB wholesale market. 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. This is because the BSC assigns all flexibility delivered by a customer to their Supplier, with the exception of flexibility instructed by National Grid 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, 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.

Enel X UK Ltd, raised Modification P415 on 30 September 2020, with a view that the Modification should be implemented as soon as practicable noting that as the proposed solution depends on the baselining methodologies from P376, it cannot be implemented before that without significant duplication of effort.

Solution Principles

The group discussed the proposal and agreed that an economic / efficient solution is needed to allow VLPs to independently operate in the wholesale market and address the P415 defect, but stressed the need for consideration of how it can work with existing Supplier arrangements and imbalances to ensure that it is fair and reasonable across the market.

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).

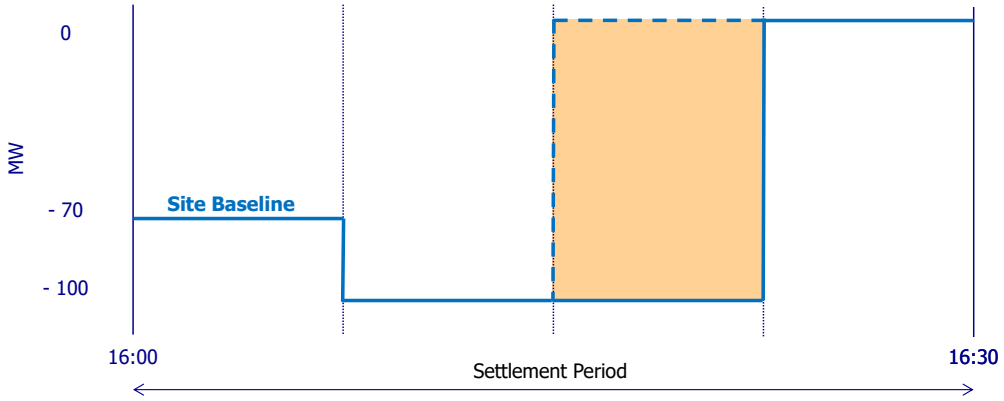
What are Deviation Volumes

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.

For Example:

- VLP enacts an Early Shutdown (i.e. reduces demand at site boundary)
- The Early shutdown (i.e. the demand reduction action) effectively results in an additional +11 MWh on the Total System



- Pre VLP action site would have consumed 35 MWh
- Post VLP action site consumed 24 MWh
- Deviation equivalent of + 11 MWh on the Total System

P415 relationship with P344, P375 and P376

ELEXON note that a lot 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 will build upon the functionality of P344, P375 and P376 to reduce cost and promote efficiency.

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

Deviation Volume shall be the difference between what a site is forecast to consume / generate and what was actually consumed / generated as a result of a VLP action taken at that site.

In order to calculate Deviation Volumes Settlement needs to be able to accurately forecast an expected BM Unit volume. P376 introduces a new defined item 'Settlement Expected Volume' which represents an expected BM Unit volume based upon historical metered volumes. P415 proposes to utilise this P375 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.

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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).

Workgroup Discussions

The purpose of this section is to formally catalogue the P415 Workgroup member discussions / opinions held throughout the Workgroup meetings over a period of eight meetings between December 2020 and December 2021.

What is a VLP trading in the wholesale market?

Summary:

- Power as a product
- VLP to inherit imbalance volumes its actions create
- Supplier imbalance volumes shall be adjusted for VLP activity
- VLP not to be allocated metered volume

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

The group next considered Ofgem definition of an Independent Aggregators 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 the site but the responsibility for trading those volumes lays with another party).

By acting on a site, a VLP is effectively creating imbalance on a Supplier's account (i.e. the Supplier imbalance position will change). If the VLP action causes the Metered Volume increases then then the Supplier is short and if the VLP action causes the Metered Volume goes 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 (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 suppliers 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. 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).

The Workgroup agreed this should be the implicit transaction behind 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**

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 th 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 to 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 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 to 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 an Independent 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.

A Supplier representative pointed out that they have no problem with VLP 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, but that the Ofgem representative for P415 would be a good interface to highlight to the Authority the groups thoughts on the matter. 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.

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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 influencing the price to their benefit.

The group were comfortable with this assumption 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.

Should a VLP be liable for non-commodity levies?

Summary

- **No** because levies are calculated using metered volumes and under proposed solution 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 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.

It was noted that, under P415, VLP activity could conceivably impact the consumption-based TNUoS, DUoS and BSUoS charges. The National Grid 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 is required**
  Alternate view – Supplier could be remunerated through imbalance settlement

Proposer View

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 Wholesale at a disadvantage and therefore compensation was 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.

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.

Workgroup Discussions

ELEXON note 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 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.

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

The group considered the timelines and impacts associated with either raising a Modification to run concurrently with P415 (that could unlock efficiencies in implementation) or after P415 has received a decision from Ofgem, preferring to wait until Ofgem makes a positive decision on the issue of Supplier compensation before undertaking any further work on this aspect.

Supplier Compensation Liability

- Who should be liable for Supplier compensated? **Proposer view – VLP, as the Balancing Responsible Party should be liable**
  Alternate view – Liability could be mutualised across all Suppliers as they benefit from lower wholesale market costs

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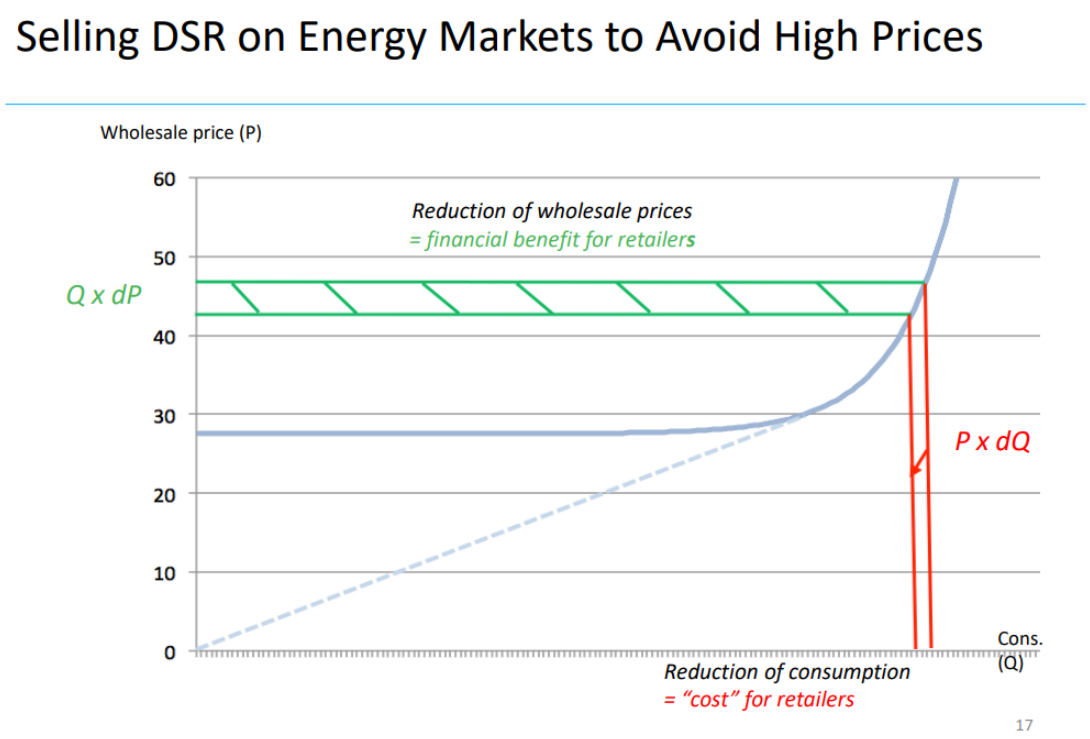
Proposer View

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 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 and the compensation price should be considered carefully to mitigate this.

Alternate View

An alternate view discussed 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 and the generation costs.



It was argued that 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.

Workgroup Discussions

Noting that the Proposer's preferred solution is the approach where VLP remains liable for costs incurred by the Supplier under P415, the group discussed whether mutualised compensation by Suppliers should be a required variant within the Cost Benefit Analysis (CBA).

The Workgroup felt uncomfortable with not continuing to explore both options via the CBA and so both variants were recommended be included on the basis that it does not preclude any approaches from further development and potential presentation of both options to Ofgem as the ultimate decision maker for P415.

Supplier Compensation Price

Summary:

- What price should the Supplier be compensated at?
  - Retail price? **Expensive and difficult to implement**
  - 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
  - Supplier Sourcing Cost price? **Proposer view – Representative of Supplier incurred Costs and adheres to solution principles**

Proposers View on Supplier Compensation

- VLP should be liable to pay Suppliers compensation when Suppliers suffer detrimental impact from any wholesale market activity VLP benefits from (load reduction)
- Conversely Suppliers should be liable to pay VLP compensation when VLP suffer detrimental impact from any wholesale activity Supplier benefits from (load increase)
- Compensation payments to/from Parties should be administered by BSCCo as a BSC Trading Charge
- Supplier compensation should be paid be paid for all VLP activity (i.e. both balancing and wholesale market activity.

The Proposer walked the work group through his 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, just 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

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The Workgroup agreed that compensation paid at the retail price would ensure that the Supplier is completely unaffected by VLP activity. 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 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 majority of the Workgroup agreed that 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 so not operate at a disadvantage and so the wholesale market remains competitive.

An alternative view was discussed by the Workgroup that the Supplier compensation price should be the day-ahead (i.e. spot market price). The argument presented was that should a Supplier be aware of the deviation at site it when the trade was submitted (i.e. at H-60 GCT) it would have the opportunity to trade these volumes on the intra-day 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 of the energy is <u>not</u> the sourcing cost but the spot market price.

<u>Supplier Compensation Price Methodology</u>

The group considered the proposed methodology governance for calculating a Supplier compensation price. This would define how a reasonable representation for the sourcing costs of a Supplier for a 'given time period' is to be calculated and will be represented by a single £ / MWh value.

The group noted that the methodology should define the required data and the data sources, define how data is to be validated and erroneous / duplicated data is to be removed, define exception scenarios and defaulting rules and be its own Code Subsidiary Document (CSD) and so have appropriate change governance procedures applicable.

Noting that this element would be impact assessed to ensure that it is a cost effective solution, the group wish to better understand indicative costs associated with this approach and Elexon will investigate to see what information can be shared with the Workgroup at this stage.

Non-delivery calculation

Summary:

- No change needed

The non-delivery calculation identifies, per Settlement Period, whether a BMU 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 BMU 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 BMU 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.

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The VLPs in the group were asked whether providing a BMU 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.

ELEXON asked National Grid if they will need visibility of what VLPs intend to do 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 National Grid representative agreed to take this away for internal discussion.

Credit Arrangements

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.

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

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 think it 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).

Solution Requirements

Due to the breadth of P415, this document has been structured into subject areas. A consolidated table of Business Requirements (BR) is provided in Appendix A. Please note that the following requirements represent the Proposer's solution and do not reflect any alternate solutions discussed by the Workgroup.

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 shall create a new Trading Party category of Virtual Lead Party 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. **Note** there are no dependencies between the aforementioned Participation Capacities. A BSC Party can one or the other or both.

As a Trading Party (in the new category of VLP) Independent Aggregators will be liable for BSC Cost recovery via Funding Shares.

i. the "Main Funding Share" (FSM_{pm}) of a Trading Party is its proportionate share of Credited Energy Volumes

ii. the "SVA (Production) Funding Share" ($FSPS_{pm}$) of a Trading Party is its proportionate share of Credited Energy Volumes for Production BM Units

iii. the "General Funding Share" of a Trading its proportionate share of the aggregate of certain BSCCo Charges (of which a Trading Party in the category of VLP shall be liable).

iv. The "Annual Funding Share" of a Trading Party is the sum of its General Funding Shares for the 12 consecutive months ending with and including that month, divided by the sum for all Trading Parties of their General Funding Shares for such 12 months.

Note as Deviation Volumes are not metered volumes they do not contribute towards Credited Energy Volumes in the "Main Funding Share" and "SVA (Production) Funding Share" calculations (although any MVRN volumes would be included here).

BR1	
Independent Aggregators shall be able to register as a BSC Trading Party under a new Trading Party role type (Virtual Trading Party).	
1.1	A BSC Party shall be able to register with the Central Registration Agent (CRA) that it intends to act in the Participation Capacity of a Virtual Trading Party (i.e. aggregate deviations of consumer loads to trade on the wholesale market). Note independently of the above: A BSC Party shall be able to register with the Central Registration Agent (CRA) that it intends to act in the Participation Capacity of Virtual Lead Party (i.e. aggregate deviates of consumer loads to provide balancing services to NETSO); **Note** there are no dependencies between the aforementioned Participation Capacities. A BSC Party can one or the other or both.
1.2	For a BSC Party that registers solely as a Trading Party (in the new category of Virtual Trading Party) the CRA shall: a) allocate that BSC Party Energy Accounts, and; b) **not** allocate that BSC Party a Virtual Balancing Account.

	Note such a BSC Party will therefore be a Trading Party and will be able to be subject to Energy Contract Volume Notifications (ECVNs) or a Subsidiary Party in a Metered Volume Reallocation Notifications (MVRNs).
1.3	For a BSC Party that registers solely with the Virtual Lead Party participation Capacity the CRA shall: a) **not** allocate that BSC Party Energy Accounts, and; b) allocate that BSC Party a Virtual Balancing Account. **Note** such a BSC Party will therefore not be a Trading Party and will not be able to be subject to Energy Contract Volume Notifications (ECVNs) or the Subsidiary Party in a Metered Volume Reallocation Notifications (MVRNs).
1.4	For a BSC Party that registers in the participation capacity of a Virtual Lead and in the participation capacity of a Virtual Trading Party the CRA shall: a) allocate that BSC Party Energy Accounts, and; b) **not** allocate that BSC Party a Virtual Balancing Account. Such a BSC Party will therefore be a Trading Party and will be able to be subject to ECVNs and be the Subsidiary Party in a MVRN.
1.5	CRA shall remove Energy Accounts and allocate a Virtual Balancing Account to a BSC Party that: a) is not required to hold Energy Accounts under one of its participation capacities; and b) registers to have its Energy Accounts removed. This removal can only happen if no future dated ECVN or MVRN is in force, in respect of which the Party is a Contract Trading Party and the Party has terminated all ECVNA Authorisations and MVRNA Authorisations made under its authority.
1.6	A BSC Party that has registered solely with the participation capacity of Virtual Trading Party will be required to pay the Base Monthly Charge.
1.7	A BSC Party that has registered solely with the Virtual Lead Party participation capacity (and not as a Trading Party) will be required to pay a Base Virtual Lead Party Monthly Charge (instead of the Base Monthly Charge).
1.8	A BSC Party that has registered with both the Virtual Lead Party participation capacity and as a Virtual Trading Party will be required to pay the Base Monthly Charge only.
1.9	A BSC Party that has registered Virtual Trading Party will have Funding Shares (Main, SVA General or Default) calculated and so will be liable for any BSC cost recovery via the Funding Share allocation method. Such a BSC Party will also be liable for BSC Specified Charges as per BSC Section D.
1.10	A BSC Party that has registered solely with the Virtual Lead Party participation capacity (and not as a Trading Party, Licensed Distribution System Operator or Transmission Company) will not have Funding Shares (Main, SVA General or Default) calculated and so will not be liable for any BSC cost recovery via the Funding Share allocation method. Such a BSC Party will still be liable for BSC Specified Charges as per BSC Section D.

P415 'Facilitating access to wholesale markets for flexibility dispatched by VLPs'
Performance Assurance Activities

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

Whilst the new Virtual Trading Party 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.

BR2	
Independent Aggregators wishing to register as a BSC Virtual Trading Party shall be required to demonstrate the ability to perform the activities and obligations under the BSC before it can be registered by the CRA.	
2.1	A BSC Party shall be required to demonstrate the ability to perform the activities and obligations under the BSC before it can be registered by the CRA in the participation capacity of Virtual Trading Party. To do so a BSC Party shall be obliged to meet the Qualification Requirements (please see BSCP537), assessed through the Party Qualification Process, in order to establish: (a) the ability to perform their activities and obligations under the Code; (b) the ability of systems and processes used by such persons to support the aforementioned functions, activities and obligations under the code.
2.2	To clarify the qualification process for the Participation Capacity of Virtual Lead Party (i.e. aggregate deviates of consumer loads to provide balancing services to NETSO) and the qualification process for the Participation Capacity of a Trading Party (in the new category of Virtual Trading Party i.e. aggregate deviations of consumer loads to trade on the wholesale market) are distinct and separate. I.e. a BSC Party may qualify and operate as either or both a Virtual Lead Party and a Virtual Trading Party (Virtual Lead Party)

Currently all BSC Parties and Party Agents must demonstrate the required ability to communicate with BSC Central Systems to provide assurance that a Party is capable of communicating and successfully interpreting the files sent to and from BSC Central Systems. Qualification also helps check that systems won't pose a risk to settlement.

As a Virtual Trading Party is distinct and separate from the existing VLP Participation Capacity therefore CVA Qualification will also be needed.

BR3	
Independent Aggregators wishing to register as a BSC Virtual Trading Party shall be required to demonstrate that they have the use of, and maintain, a Party System in compliance with the BSC Communication Requirements Document before it can be registered by the CRA (please see BSCP70).	
3.1	A BSC Party shall be required to demonstrate that has the use of, and maintains, a Party System in compliance with the BSC Communication Requirements Document before it can be registered by the CRA in the participation capacity of Virtual Trading Party. To do so a BSC Party shall submit to, and submit its Party System to, CVA Qualification testing, in compliance with BSC Communication Requirements Document and BSC Procedure CVA Qualification Testing for Parties and Party Agents (BSCP70), in order to establish that:

	(a) the Party System is compatible with the relevant Communication Medium; the Party is capable of sending and receiving BSC Communications

Secondary BM Units

A Virtual Trading 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.

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.

BR4	
A Virtual Trading Party shall be able to register Secondary BM Units.	
4.1	A Virtual Trading Party shall be able to register Secondary BM Units (SBMU) using the existing process.
4.2	A Virtual Trading Party shall be able to notify CRA that a Secondary BM Unit is to be baselined and allocate MSID / AMSID Pairs to that Baselined BM Unit (i.e. it wishes to use the baselining solution (introduced by P375). **Note** only baselined Secondary BM Units shall calculate Deviation Volume and so be used to balance wholesale market trades.
4.3	BSC Cost recovery purposes a Secondary BM Units (SBMU) held by a Virtual Trading Party shall be treated the same as a Primary BM Unit (i.e. costs the same).
4.4	Secondary BM Units registered by Virtual Trading Party shall be required to submit Demand Capacity (DC) and Generation Capacity (GC) where: • GC for a SBMU shall be the maximum positive 'Deviation Volume' expected in that BSC Season • DC for a SBMU shall be the maximum negative 'Deviation Volume' expected in that BSC Season The Secondary BM Units Relevant Capacity is its GC value if its GC+DC is greater than zero. Its Relevant Capacity is its DC value if its GC+DC is less than or equal to zero.

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4.5	A Secondary BM Unit registered by a Virtual Trading Party shall have its P/C Status determined by its Relevant Capacity. I.e. if its Relevant Capacity is GC then P/C Status shall be set to P (i.e. Production) and if its Relevant Capacity is DC then P/C Status shall be set to C (i.e. Consumption)
4.6	GC and DC breach monitoring process shall apply to Secondary BM Units registered by a Virtual Trading Party
4.7	Secondary BM Units shall not be able to be part of a Trading Unit.
4.8	Secondary BM Unit registered by a Virtual Trading Party shall be treated as non-credit qualifying BM Unit for the purposes of calculating Credit Cover.

Credit Cover

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

The Credit Cover calculation assesses **Energy Indebtedness (EI)** over a 29 calendar day rolling period. The timing is linked to the timing of our Initial Settlement (SF) Run. The SF Run determines the Trading Charges you need to pay or be paid. Charges are also calculated for information at five Working Days in the Interim Information (II) Run, which you can use as an estimate of your SF Trading Charges.

For each Settlement Period, the Energy Indebtedness is the sum over the previous 29 calendar days (including the current Settlement Day) of:

Credit Assessment Energy Indebtedness (CEI) is an estimate of Energy Indebtedness used until we carry out the Interim Information (II) Run after 5 Working Days. For Primary BM Units the CEI s is based on a comparison of the forecast metered volume and the Aggregated Contract Volume. Under the current arrangements Secondary BM Unit CEI is set to zero. This is not compatible with wholesale market trading which can incur energy imbalance and so will need to be amended for P415

Metered Energy Indebtedness (MEI) uses Central Data Collection Agent (CDCA) metered data to replace FPN data for Credit Qualifying BM Units. The MEI data is available for use in the credit calculations after two Working Days. For all other Primary BM Units (including Interconnector BM Units) and Secondary BM Units, the MEI doesn't apply and these days are part of their CEI;

Actual Energy Indebtedness (AEI) is an estimate of your Trading Charges for a given Settlement Period expressed in MWh. It is calculated from five Working Days after a Settlement Day using the Interim Information (II) Run data. It replaces the CEI (and MEI) for those particular Settlement Days.

BR5

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

Energy Indebtedness (EI_{pj}) for Secondary BM Units shall be the sum over the previous 29 calendar days (including the current Settlement Day) of CEI, MEI and AEI as follows:

5.1 Credit Assessment Energy Indebtedness (CEI) shall be calculated as follows:

CEI_{pj} = – ((∑ Credited Energy Volumes + ∑ Deviation Volumes) – ∑ Contractual Volumes)

- Credited Energy volumes represent any MVRN where the VLP holds the subsidiary Energy Account
- Deviation Volumes represent the actions they have taken as a VLP in the wholesale market
- Contractual volumes represent the bilateral contracts the VLP has entered into

I.e.

$CEI_{pj} = -((\sum_{a,i} CAQCE_{iaj} + \sum_{a,i} CAQDE_{iaj}) - \sum_{a} QABC_{aj})$

where:

(a) summation on 'a' extends to the Production Energy Account and Consumption Energy Account of the Trading Party, and

(b) CAQCEiaj is the Credit Assessment Credited Energy Volume

(b) $CAQDE_{iaj}$ is the Credit Assessment Credited Deviation Volume

(c) $QABC_{aj}$ is the Account Bilateral Contract Volume

The $CAQDE_{iaj}$ is the Credit Assessment Credited Deviation Volume shall be only be calculated for Secondary BM Units registered to a Virtual Trading Party as follows:

a) $CAQDE_{iaj}$ = (0.5 * Relevant Capacity)

Where the relevant capacity is GC $CAQDE_{iaj}$ = (0.5 * BMCAEC)

Where the relevant capacity is DC $CAQDE_{iaj}$ = (0.5 * BMCAIC)

The Secondary BM Unit Credit Assessment Export Capability ($SBMCAEC_i$) shall be the quantity (in MW) determined as follows:

$SBMCAEC_i = SCALF_i * GC_i$

$$SCALF = \frac{\text{average net deviation Production for the BSC Season (MWh)}}{\text{maximum deviation Production for the BSC Season (MWh)}}$$

The BM Unit Credit Assessment Import Capability ($SBMCAIC_i$) shall be the quantity (in MW) determined as follows:

	$SBMCAIC_i = SCALF_i * DC_i$ $SCALF = \frac{\text{average net deviation Consumption for the BSC Season (MWh)}}{\text{maximum deviation Consumption for the BSC Season (MWh)}}$ **Note** CEI / CAQDE / SBMCAIC / SBMCAEC / SCALF shall only be calculated for settlement periods where a 'SBMU Wholesale market activity notification' has been received.
5.2	Metered Energy Indebtedness (MEI_{pj}) shall remain zero for SBMUs in all circumstances.
5.3	Actual Energy Indebtedness (AEI) shall remained unchanged (i.e. AEI represents Trading Charges)

A Party may be in Default of the BSC for a number of reasons. The full list is in Section H of the Code, but the reasons include:

- Credit Default – the Party does not have enough credit lodged to cover its indebtedness;
- Payment default – the Party is unable or refuses to pay charges;
- The appointment of an administrator, receiver or liquidator; or
- A Party informing us that it cannot pay its debts.

As Defaulting Parties debts are ultimately spread across all market participants the BSC Panel has a duty of care to protect other Parties from the Default and will try to minimise the potential debt. It will consider information that we provide and consider the impact on the contracted counter Parties, and on the Defaulting Party.

As a Virtual Trading Party is not exempt from the above and the BSC Panel shall have the same powers and rights in relation to these Parties as it does for existing Trading Parties.

BR6	
The Panel shall be given the right to suspend the right of a BSC Party where they have become a 'Defaulting Party' due to the occurrence of a Default as per BSC Section H.	
6.1	The Panel may suspend the right to submit such Energy Contract Volume Notifications (ECVN) and may disapply (for the purposes of Settlement) any such Energy Contract Volume Notifications as have already been submitted at any time (except to the extent that they relate to Settlement Periods for which the Submission Deadline has occurred prior to the time when the Panel notifies the Parties of such disapplication
6.2	The Panel may suspend the right to submit such Meter Volume Reallocation Notifications (MVRN) and may disapply (for the purposes of Settlement) any such Meter Volume Reallocation Notifications as have already been submitted at any time (except to the extent that they relate to Settlement Periods for which the Submission Deadline has occurred prior to the time when the Panel notifies the Parties of such disapplication

Contract Notifications

P415 'Facilitating access to wholesale markets for flexibility dispatched by VLPs'
Virtual Trading Parties 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 ECVN and MVRN as per below:

BR7	
A Virtual Trading Party shall be able to be party to a ECVN.	
7.1	A Virtual Trading Party shall be possible to submit Electricity Contract Volume Notification (ECVNs)
7.2	A Virtual Trading Party shall be possible to be the Subsidiary Party Metered Volume Reallocation Notification (MVRNs)

BR8	
SBMU shall remain unable to be included in a MVRN	
8.1	It shall not be possible to submit Metered Volume Reallocation Notification (MVRNs) in relation to Secondary BM Units

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 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.

How does the baselining work?

VLP notifies settlement 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:

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

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.

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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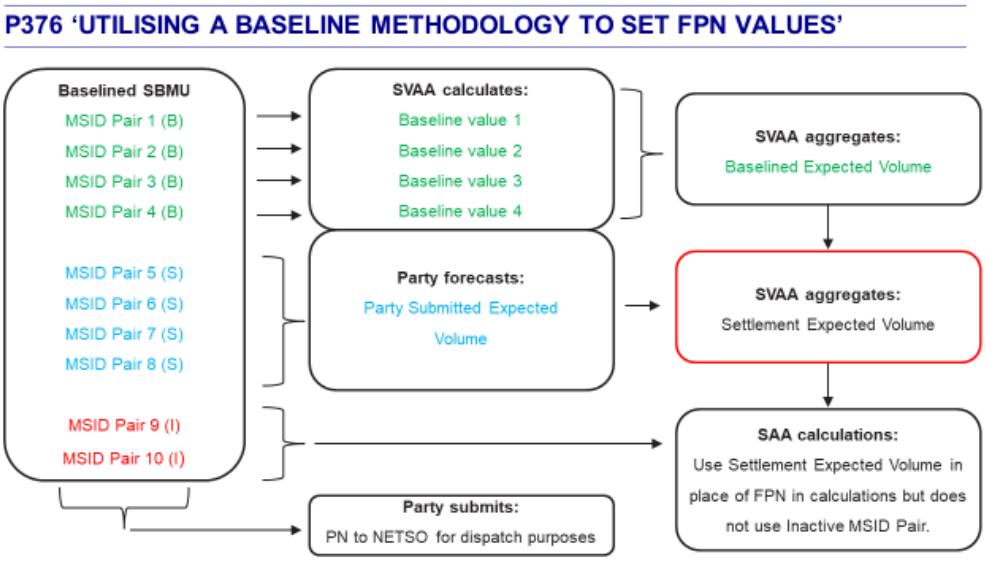

SVAA then calculates a Settlement Expected Volume for Baselined BM Units using an agreed baseline methodology and historical metered consumption.

Why is P376 relevant for P415?

A Deviation Volume is the difference between what a site is forecast to consume / generate and what was actually consumed / generated that 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 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 introduces a new defined item 'Settlement Expected Volume' which represents an expected BM Unit volume based upon historical volume. P415 proposes to utilise this existing functionality but will require minor amendments to the current arrangements.

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

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.

BR9	
P415 shall amend the notification type options available for event day submissions to Settlement	
9.1	When submitting an event day, it shall be required to choose an option from a predefined list of event day types. These shall be amended to the following two options: • VLP Activation • Other

P415 'Facilitating access to wholesale markets for flexibility dispatched by VLPs'
The P376 arrangements use the receipt of a BOALF file (i.e. BM instruction) from NGESO to trigger the calculation of Settlement Expected Volume for a BM Unit. Under P415 we want to calculate Settlement Expected Volume for wholesale market activity too. To encompass all trading strategies the WG agreed that a Virtual Trading Party is best placed to inform Settlement of when they are active in the wholesale market.

BR10	
Virtual Trading Parties shall submit a 'SBMU Wholesale market activity notification' per Settlement Period to settlement for each Baselined Secondary BM Unit active in the wholesale market.	
10.1	Virtual Trading Parties shall be able to submit 'SBMU Wholesale market activity notifications' for each Settlement Period until the Gate Closure Time for that Settlement Period (currently 60 minutes prior)

Calculating SBMU Deviation Volumes

As a Virtual Trading 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.

- When a Virtual Trading Party is activated in the BM NGESO sends a BOA to settlement.
- When a VLP is activate in the wholesale market the Virtual Trading Party shall be obligated to inform Settlement when they are active in the wholesale market to trigger.

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

BR11	
SVAA shall calculate Secondary BM Unit Deviation Volumes for all baselined Secondary BM Units registered to a Virtual Trading Party where either a BOA is received from NGESO or a 'SBMU Wholesale market activity notification' has been received from that Virtual Trading Party.	
11.1	Upon receipt of a BOA for a particular SBMU or a 'SBMU Wholesale market activity notification' SVAA shall trigger the calculation of Secondary BM Unit Deviation volumes.
11.2	SVAA shall calculate Secondary BM Unit Deviation volumes per Settlement Period as follows: SBMU Deviation Volume = SBMU Metered Volume – SBMU 'Settlement Expected Volume'
11.3	Should the SVAA not be able to calculate SBMU Settlement Expected Volumes the SAA shall default to the FPN instead (as in current P376 processing). In such defaulting situation where the FPN is not be available SBMU Deviation Volumes shall be set to zero.
11.4	As part of each SVA Run, SVAA shall calculate the Secondary BM Unit Deviation Volumes (i.e. LLF and GCF adjusted delivered volumes per MSID) for each Secondary BM Unit, and report it to the SAA for subsequent use in settlement.

MSID Pair Delivered Volume

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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 a 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.

BR12	
Aggregators shall be required to submit Half Hourly Delivered Volumes for each non-baselined MSID Pair (and Baselined MSID Pair with the Submission status) in a Secondary BM Unit to Settlement to which either a balancing action or wholesale market activity (or both) has taken place. SVAA shall be required to calculate Half Hourly Delivered Volumes for each baselined MSID Pair in a Secondary BM Unit to Settlement to which either a balancing action or wholesale market activity (or both) has taken place.	
12.1	The Lead Party of a Secondary BM Unit to which either or both a balancing action or wholesale market activity has taken place shall provide a MSID Pair Delivered Volume submission to SVAA by WD+1
12.2	The SVAA shall validate that SVA Metering System Numbers included in the submission received for a Secondary BM Units are included (on that Settlement Date) in a Secondary BM Unit for which the Lead Party is responsible (and report an exception if not).
12.3	The SVAA shall allocate the MSID Pair Delivered Volume between the composite MSIDs using the existing arrangements.
12.5	As part of each SVA Run, SVAA shall calculate the Secondary BM Unit Supplier Delivered Volumes (i.e. LLF and GCF adjusted delivered volumes per Supplier BMU) for each Secondary BM Unit, and report it to the SAA for subsequent use in settlement.

Within the current arrangements the VLP impacted Suppliers Imbalance adjustments (designated within the BSC as the Period Supplier BM Unit Delivered Volume ($QBSD_{ij}$)) is calculated by aggregating the Period Secondary BM Unit Supplier Delivered Volume (QSD_{iji2}) from all Secondary BM Units that impact the Supplier BM Unit.

$QBSD_{ij} = \Sigma_{i2} QSD_{iji2}$

where $\sum_{i2}$ represents the sum over all Secondary BM Units i2 for which Primary BM Unit "i" is to be allocated a value of QSD_{iji2}.

However QSD_{iji2} 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 volumes Trading Party (in the new VLP role) to account for wholesale market activity.

These new arrangements will need to work in parallel with the existing arrangements to that the central systems can settle Suppliers accurately both VLP and Virtual Trading Parties (in the new role of VLP) that impact their imbalance position.

BR13

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The calculation of Period Secondary BM Unit Supplier Delivered Volume (QSD_{iji2}) shall be amended to account for which type of BSC Party (i.e. VLP or Virtual Trading Party is the lead Party of a Secondary BM Unit.	
13.1	For Secondary BM Units where the Lead Party is a **Virtual Lead Party** the Period the Secondary BM Unit Supplier Delivered Volume (QSD_{iji2}) shall continue to be calculated under the existing arrangements e.g. In respect of each Settlement Period, for each Secondary BM Unit "i2", for each Primary BM Unit "i", the Period Secondary BM Unit Supplier Delivered Volume (QSD_{iji2}) is the amount determined as follows: $QSD_{iji2} = QSD_{i2j} * SP_{iji2}$ where QSD_{i2j} represents physically deliver balancing volume SP_{iji2} represents the Supplier BM Unit Proportion of the SBMU Delivered Volumes
13.2	For Secondary BM Units where the Lead Party is a **Virtual Trading Party** the Period the Secondary BM Unit Supplier Delivered Volume (QSD_{iji2}) shall continue to be calculated as follows: In respect of each Settlement Period, for each Secondary BM Unit "i2", for each Primary BM Unit "i", the Period Secondary BM Unit Supplier Delivered Volume (QSD_{iji2}) is the amount determined as follows: $QSD_{iji2} = QDE_{i2j} * SP_{iji2}$ where QDE_{i2j} represents Deviation Volume SP_{iji2} represents the Supplier BM Unit Proportion of the SBMU Delivered Volumes

Supplier Compensation

One of the key principles under which the P415 solution was that 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 as 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 hasn't used it. As P415 adjusts the Supplier for any VLP activity (both BM and WM see BR13) this means that they won't receive any spill payments for the bought but unused energy.

As noted previously Supplier shall only be compensated for Wholesale Market volumes and so settlement will 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. The work group considered the issue and agreed a set of principles

1. Deviation volumes shall only be allocated to a market where Settlement has received the relevant notifications for (i.e. WM = Wholesale Market Notifications and BM = BOALF)

2. Each site within a SBMU shall contribute towards all notified markets equally

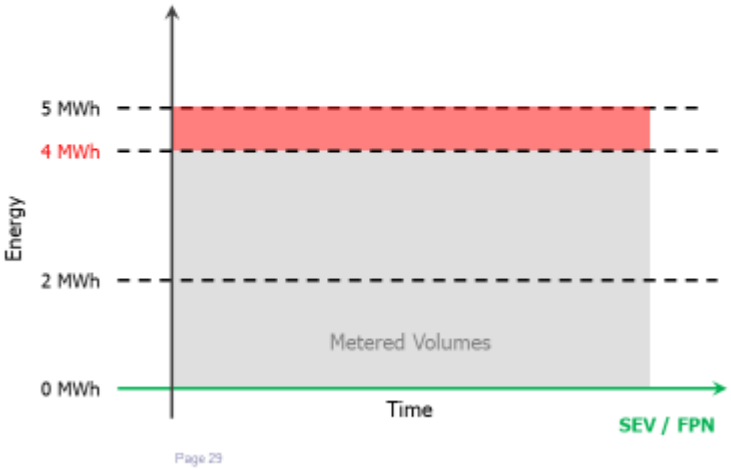
   I.e. if at a SBMU level 25% of the volume is allocated to wholesale market then 25% of the deviation volumes at each site within the SBMU shall be allocated to the wholesale market.

3. Volume allocation at MSID level shall be proportional based on SBMU level

Solution

Consider this scenario again where a SBMU is active in both wholesale and BM markets but under delivers

SEV = 0 MWh WM = Active BOA = 3 MWh QM = 4 MWh



What do we know?

MWh BOA = 3 MWh
MWH Non-Delivery = 0 MWh

Total Deviation Volume = 4 MWh

Therefore

WM SBMU Volumes = 4 – 3 = 1

WM SBMU Proportion = 1 / 4 = 0.25

BM SBMU Proportion = 3 / 4 = 0.75

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BR14	
Supplier shall only be compensated for Wholesale Market volumes and so settlement will need to identify for each SBMU what volumes are to be allocated as balancing volumes and what volumes are to be allocated as wholesale market volumes.	
14.1	For each SBMU settlement shall calculate the proportion of volumes to allocate to the Wholesale market as follows: WM_{i2j} % = Deviation Volume – Delivered Balancing Volumes / Deviation Volumes
14.2	SAA shall calculate the Period Secondary BM Unit Supplier Compensation Volume as follows: $QCV_{iji2} = QSD_{iji2} * WM_{i2j}$ % Where QSD_{iji2} = Period Secondary BM Unit Supplier Delivered Volume
14.3	SAA shall calculate the Period BM Unit Supplier Compensation Volume as follows: $QSV_{ij} = {}^{i2}\sum QCV_{iji2}$ Where QCV_{iji2} = Period Secondary BM Unit Supplier Compensation Volume
14.4	SAA shall calculate the Period Secondary BM Unit Compensation Volume as follows: $QCV_{ji2} = {}^{i}\sum QCV_{iji2}$ Where QCV_{iji2} = Period Secondary BM Unit Supplier Compensation Volume

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As noted previously the P415 workgroup discussed two potential Supplier compensation mechanisms:

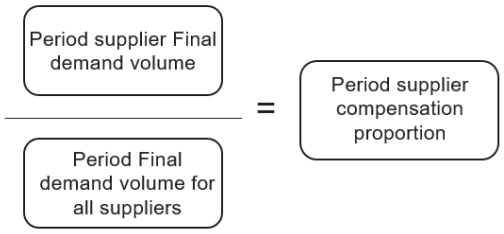
- Proposed solution
  - Proposed solution Compensation costs are mutualised across all Suppliers
  - Compensation paid at a price that represents the average Supplier sourcing costs
- Alternate solution
  - VLPs are liable for compensation costs
  - Compensation paid at a price that represents the average Supplier sourcing costs

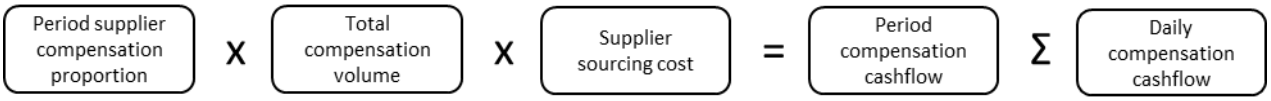
Workgroup felt uncomfortable with not continuing to explore both options via the CBA and so both variants were recommended be included on the basis that it does not preclude any approaches from further development and potential presentation of both options to Ofgem as the ultimate decision maker for P415.

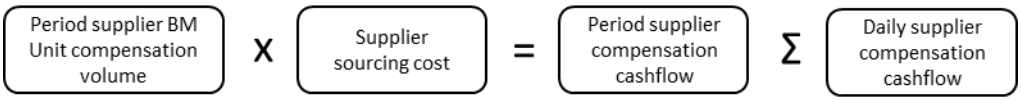
Proposed Solution

In the proposed solution 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)







BR15a	
The Daily Compensation Cashflow (SCVp) will be a new Trading Charge. It will be included on Trading Charge Advice Notes that are sent to Trading Parties (with the category of Supplier)	
15a.1	In respect of each Settlement Period, for each Energy Account, for each Supplier, SAA shall calculate the Supplier Compensation Proportion (CMP_{aj}) as per a proportion of final demand
15a.2	SAA shall calculate the System Period Compensation Volume as follows: $QCV_j = {}^{i2}\sum QCV_{ji2}$ Where QCV_{ji2} = Period Secondary BM Unit Compensation Volume
15a.3	In respect of each Settlement Period, for each Energy Account, for each Supplier, SAA shall calculate the Supplier Compensation Volume as follows:

	$QCV_{aj} = QCV_j * CMP_{aj}$
15a.4	SAA shall calculate the Settlement Period Compensation Cashflow ($SVCC_{ij}$) by multiplying the Supplier Compensation Volume (QCV_{aj}) by the supplier sourcing cost
15a.5	SAA shall calculate Daily Compensation Cashflow (SCV_p) as the summation of Settlement Period supplier Compensation Cashflow ($SVCC_{ij}$) across all Energy Accounts 'a' for which that Party is the Lead Party and across all Settlement Periods j falling within a given Settlement Date.
15a.6	SAA shall send Daily Compensation Cashflow (SCV_p) to FAA alongside the other Trading Charges.
15a.7	FAA shall include Daily Compensation Cashflow (SCV_p) on invoices and Advice Notes to Trading Parties.

BR16a	
The Daily Supplier Compensation Cashflow (SCCp) will be a new Trading Charge. It will be included on Trading Charge Advice Notes that are sent to Supplier impacted by Independent Aggregators	
16a.1	SAA shall calculate the Settlement Period Supplier Compensation Cashflow ($SPCC_{ij}$) by multiplying the Period Supplier BM Unit Compensation Volume (QCV_{aj}) by the supplier sourcing cost
16a.2	SAA shall calculate Daily Supplier Compensation Cashflow (SCC_p) as the summation of Settlement Period Supplier Compensation Cashflow ($SPCC_{ij}$) across all BM Units i for which that Party is the Lead Party and across all Settlement Periods j falling within a given Settlement Date.
16a.3	SAA shall send Daily Supplier Compensation Cashflow (SCC_p) to FAA alongside the other Trading Charges.
16a.4	FAA shall include Daily Supplier Compensation Cashflow (SCC_p) on invoices and Advice Notes to Trading Parties and BSC Parties with the Virtual Lead Party participation capacity.

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 Suppliers sourcing costs and be determined in accordance with an industry agreed and governed document or methodology to which the work group agreed. This sourcing cost will be taken from the Ofgem Price Cap

BR17a	
SAA shall use an agreed methodology to provide a Supplier sourcing cost	
17a.1	The Supplier sourcing cost shall be taken from the published Ofgem price cap covering the same period as prescribed by Ofgem
17a.2	The figure used will be the single rate metering arrangement with the inclusion of an allowance for: 1. shaping, forecast error and imbalance 2. transaction costs 3. basis risk
17a.3	When Ofgem no longer produce a price cap, Elexon will develop the methodology to produce it, 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

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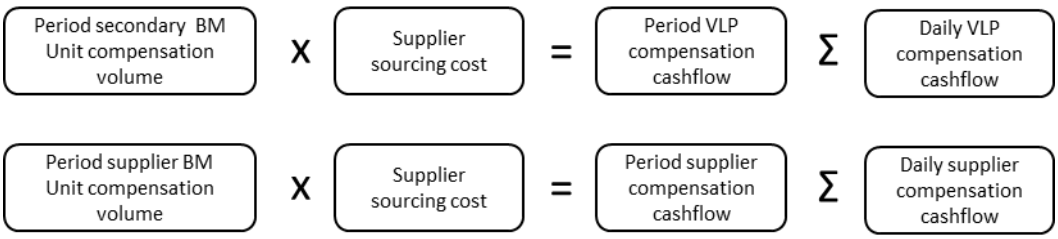
17a.4	The BSC Panel shall agree the Supplier Compensation Price Methodology and which third part service provider should be used to obtain the relevant data for use in settlement.

Alternate Solution

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

The Daily VLP Compensation Cashflow (SCVp) and the Daily Supplier Compensation Cashflow (SCCp) will be a new Trading Charge. It will be included on Trading Charge Advice Notes that are sent to Supplier impacted by Independent Aggregator activity in the wholesale market.



BR15b	
The Daily VLP Compensation Cashflow (SCVp) will be a new Trading Charge	
15b.1	SAA shall calculate the Settlement Period VLP Compensation Cashflow ($SVCC_{ij}$) by multiplying the Period Secondary BM Unit Compensation Volume (QCV_{ji2}) by the supplier sourcing cost
15b.2	SAA shall calculate Daily VLP Compensation Cashflow (SCV_p) as the summation of Settlement Period VLP Compensation Cashflow ($SVCC_{ij}$) across all Secondary BM Units i for which that Party is the Lead Party and across all Settlement Periods j falling within a given Settlement Date.
15b.3	SAA shall send Daily VLP Compensation Cashflow (SCV_p) to FAA alongside the other Trading Charges.
15b.4	FAA shall include Daily VLP Compensation Cashflow (SCVp) on invoices and Advice Notes to Trading Parties.

BR16b	
The Daily Supplier Compensation Cashflow (SCCp) will be a new Trading Charge. It will be included on Trading Charge Advice Notes that are sent to Supplier impacted by Independent Aggregators	
16b.1	SAA shall calculate the Settlement Period Supplier Compensation Cashflow ($SPCC_{ij}$) by multiplying the Period Supplier BM Unit Compensation Volume (QSV_{ij}) by the supplier sourcing cost

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16b.2	SAA shall calculate Daily Supplier Compensation Cashflow (SCC_p) as the summation of Settlement Period Supplier Compensation Cashflow ($SPCC_{ij}$) across all BM Units i for which that Party is the Lead Party and across all Settlement Periods j falling within a given Settlement Date.
16b.3	SAA shall send Daily Supplier Compensation Cashflow (SCC_p) to FAA alongside the other Trading Charges.
16b.4	FAA shall include Daily Supplier Compensation Cashflow (SCC_p) on invoices and Advice Notes to Trading Parties and BSC Parties with the Virtual Lead Party participation capacity.

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 Suppliers sourcing costs and be determined in accordance with an industry agreed and governed document or methodology to which the work group agreed. This sourcing cost will be taken from the Ofgem Price Cap

BR17b	
SAA shall use an agreed methodology to provide a Supplier sourcing cost	
17b.1	The Supplier sourcing cost shall be taken from the published Ofgem price cap covering the same period as prescribed by Ofgem
17b.2	The figure used will be the single rate metering arrangement with the inclusion of an allowance for: 1. shaping, forecast error and imbalance 2. transaction costs 3. basis risk
17b.3	When Ofgem no longer produce a price cap, Elexon will develop the methodology to produce it, 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
17b.4	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.

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 are not Metred Volumes cannot be allocated here
- Therefore a new entry is needed in the energy imbalance volume calculation to represent Deviation Volumes

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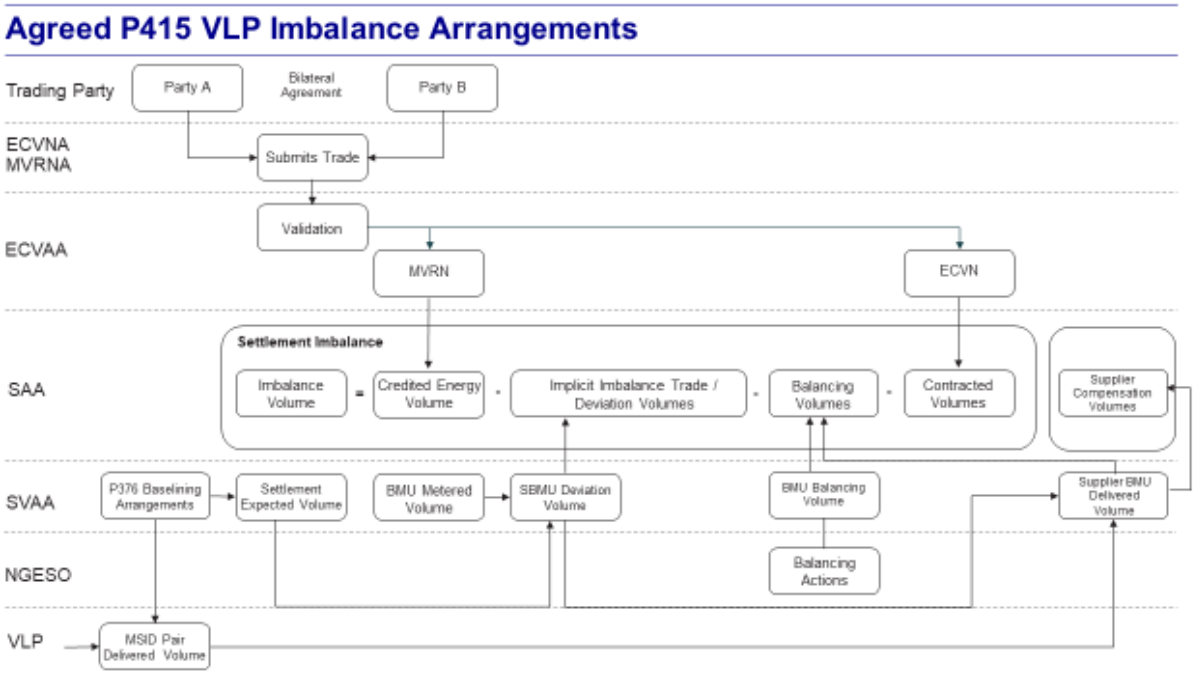

BR18	
SAA shall include Deviation Volumes in the Energy Imbalance Volume calculation when calculating imbalance volumes for Virtual Trading Parties	
18.1	For each Trading Party the Account Period Deviation Volume ($QADE_{ij}$) shall be calculated as follows: $QADE_{aj} = (\sum_i QDE_{ij} * TLM_{ij})$ Where QDE_{ij} is the Secondary BM Unit Deviation Volumes
18.2	In respect of each Settlement Period, for each Energy Account and Virtual Balancing Account, the Account Energy Imbalance Volume ($QAEI_{aj}$) will be determined as follows: $QAEI_{aj} = QACE_{aj} + QADE_{aj} – QABS_{aj} – QABC_{aj}$ Where $QAEI_{aj}$ is the Account Energy Imbalance Volume $QACE_{aj}$ is the Account Period Supplier BM Unit Credited Energy Volume $QADE_{aj}$ is the Account Period Supplier BM Unit Delivered Volume $QABS_{aj}$ is the Account Period Balancing Services Volume $QABC_{aj}$ is the Account Bilateral Contract Volume

NGESO Notification

Under current arrangements, the NGESO highlighted that P415 would bring more uncertainty to the BM and costs may occur due to this with the purchase of more reserve to cover this. The solution is that the Virtual trading party will provide a new dataflow to NGESO, which states the deviation volume expected and will update this under the same timescales as a PN.

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This was the preferred approach as the alternate would be to make changes in Grid Code and the structure of PNs, which would take more time and effort.

BR19	
Virtual Trading Parties shall inform NGESO of their deviation volume per settlement period for each baselined secondary BM Unit in which they are active in the wholesale market	
19.1	Virtual Trading Parties shall send a notification to NGESO of their deviation volume for each baselined secondary BM Unit up until gate closure using the same timescale as PNs

Requirements Table

Area	Ref	Business Requirement
Registration	BR01	Independent Aggregators shall be able to register as a BSC Trading Party under a new Trading Party role type (Virtual Lead Party).
Registration	BR02	Independent Aggregators wishing to register as a BSC Trading Party (in the new category of Virtual Lead Party) shall be required to demonstrate the ability to perform the activities and obligations under the BSC before it can be registered by the CRA.
Registration	BR03	Independent Aggregators wishing to register as a BSC Trading Party (in the new category of Virtual Lead Party) shall be required to demonstrate that has the use of, and maintains, a Party System in compliance with the BSC Communication Requirements Document before it can be registered by the CRA.
Registration	BR04	Secondary BM units shall no longer be only used for balancing services and can be registered to a Trading Party (in the new category of Virtual Lead Party)
Credit Cover	BR05	Energy Indebtedness (EI_{pj}) for Secondary BM Units shall be the sum over the previous 29 calendar days (including the current Settlement Day) of CEI, MEI and AEI as follows.
Credit Cover	BR06	The Panel shall be given the right to suspend the right of a BSC Party where they have become a 'Defaulting Party' due to the occurrence of a Default as per BSC Section H.
Contract Notification	BR07	Trading Party (in the new category of Virtual Lead Party) shall be able to be party to a ECVN.
Contract Notification	BR08	SBMU shall remain unable to be included in a MVRN
Amending the P376 solution for P415	BR09	P415 shall amend the notification type options available for event day submissions to Settlement
Amending the P376 solution for P415	BR10	Trading Parties (in the new category of Virtual Lead Party) shall submit a 'SBMU Wholesale market activity notification' to settlement when active in the wholesale market
Deviation Volumes	BR11	SAA shall calculate Secondary BM Unit Deviation Volumes for all baselined Secondary BM Units where a a 'SBMU Wholesale market activity notification' has been received
MSID Pair Delivered Volume	BR12	Aggregators shall be required to submit Half Hourly Delivered Volumes for each non-baselined MSID Pair (and Party Submission Baselined MSID Pair) in a Secondary BM Unit to Settlement to which either a balancing action or wholesale market activity (or both) has taken place.
MSID Pair Delivered Volume	BR13	The calculation of Period Secondary BM Unit Supplier Delivered Volume (QSD_{iji2}) shall be amended to account for which type of BSC Party (i.e. VLP or Trading Party (in the new VLP role) is the lead Party of a Secondary BM Unit.

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Supplier Compensation	BR14	Supplier shall only be compensated for Wholesale Market volumes and so settlement will 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.
Supplier Compensation	BR15a/b	The Daily VLP Compensation Cashflow (SCVp) will be a new Trading Charge. It will be included on Trading Charge Advice Notes that are sent to Trading Parties (with the new category of VLP)
Supplier Compensation	BR16a/b	The Daily Supplier Compensation Cashflow (SCCp) will be a new Trading Charge. It will be included on Trading Charge Advice Notes that are sent to Supplier impacted by Independent Aggregator activity in the wholesale market.
Supplier Compensation	BR17a/b	SAA shall calculate / receive the Supplier Compensation Reference Price using an agreed methodology.
Imbalance Settlement	BR18	SAA shall include Deviation Volumes in the Energy Imbalance Volume calculation when calculating imbalance volumes for Trading Parties with the new Virtual Lead Party role
NGESO Notification	BR19	Virtual Trading Parties shall inform NGESO of their deviation volume per settlement period for each baselined secondary BM Unit in which they are active in the wholesale market