

P415 Microsoft Teams Meeting

- Welcome to the P415 teleconference – we'll start in a moment
- No video please – conserve bandwidth
- All on mute – use IM if you can't break through
- Talk – pause – talk
- Lots of us are at home – be mindful of background noise and connection speeds

ELEXION

P415

Facilitating access to wholesale markets
for flexibility dispatched by Virtual Lead
Parties

11 December 2020

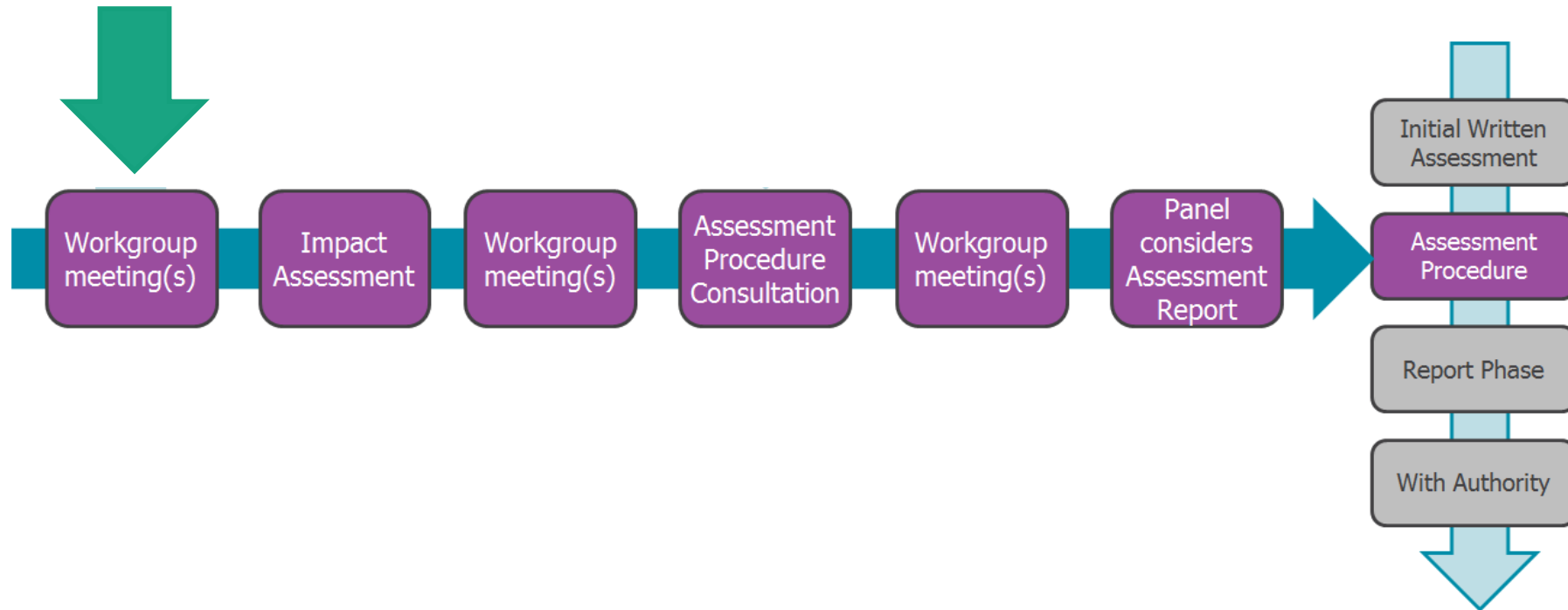
Meeting Objectives and Agenda

- Consider the background and Terms of Reference to P415; and
- Consider the Worked Example.

Agenda Item	Lead
Welcome and meeting objectives	Lawrence Jones (Chair),
Terms of Reference	Ivar Macsween (Elexon)
Overview of P415	Paul Troughton (ENEL X)
P415 Worked Example	Matthew Roper (Elexon)
Further Areas of Consideration	Workgroup
Next Steps	Ivar Macsween
Meeting close	Lawrence Jones

Where are we in the Assessment process?

- The role of the Workgroup is to assist the Proposer in developing the most appropriate solution, answer the Terms of Reference set by the BSC Panel and consider the costs and impacts of making the change.





OVERVIEW OF P415

P415

Facilitating access to wholesale markets for flexibility dispatched by Virtual Lead Parties

Markets for demand-side flexibility



	Capacity market	Ancillary services	Wholesale market	Balancing mechanism
Traded how far ahead?	Years	Years to days	Years to 1 hour	Less than 1 hour
Who buys from this market?	Government only	National Grid only	Many parties	National Grid only
Open to independent aggregators?	Yes	Yes	Not yet	Yes

Policy & legislative reasons to do this

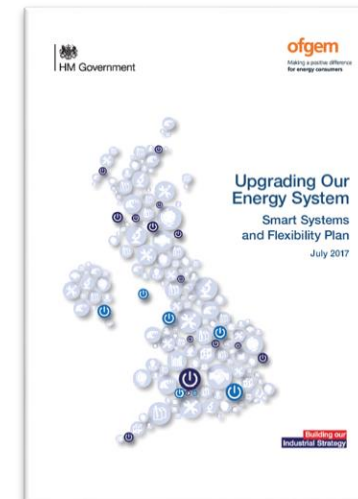


Article 17

Demand response through aggregation

1. Member States shall allow and foster participation of demand response through aggregation. 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**.

... but we should do it for efficiency and competition reasons, regardless of legal requirements.



enel x

Assessment Report

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

P375 proposes to allow Metering Equipment situated 'behind' the defined Boundary Point to be used for Settlement purposes in place of the Boundary Point Meter. Primarily, this will allow balancing-related services on-site from smaller assets to be separated from current imbalance-related activities, thus more accurately reflecting the balancing-energy volumes provided by the Balancing Service Provider (BSP).

The P375 Workgroup recommends **approval** of P375

The P375 Workgroup **does** believe P375 impacts the European Electricity Balancing Guideline (EBGL) Article 18 terms and conditions held within the BSC

This Modification is expected to impact:

- Suppliers
- Virtual Lead Parties (VLPs)
- Generators
- Meter Operator Agents (MOAs)
- Half Hourly Data Collectors (HHDCs)
- Half Hourly Data Aggregators (HHDAAs)
- Supplier Volume Allocation Agent (SVAA)
- Technical Assurance Agent (TAA)

ELEXON

Phase

Initial Written Assessment

Definition Procedure

Assessment Procedure

Report Phase

Implementation

307/06

P375

Assessment Report

1 October 2020

Version 1.0

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Initial Written Assessment

P376 'Utilising a Baselining Methodology to set Physical Notifications for Settlement of Applicable Balancing Services'

To allow the Final Physical Notification, which feeds into the Settlement of Trading Charges, to be created via a Baselining Methodology. The new Physical Notification will be de-coupled from the Physical Notification used by National Electricity Transmission System Operator (NETSO) for dispatch. This change will allow Balancing Service Providers to be fully recompensed for their actual change from normal usage and the impact this change has on the system, thus enabling greater participation.

ELEXON recommends P376 is progressed to the Assessment Procedure for an assessment by a Workgroup

This Modification is expected to impact:

- Virtual Lead Parties
- Half Hourly Data Aggregators
- ELEXON
- NETSO

ELEXON

Phase

Initial Written Assessment

Definition Procedure

Assessment Procedure

Report Phase

Implementation

28/5/05

P376

Initial Written Assessment

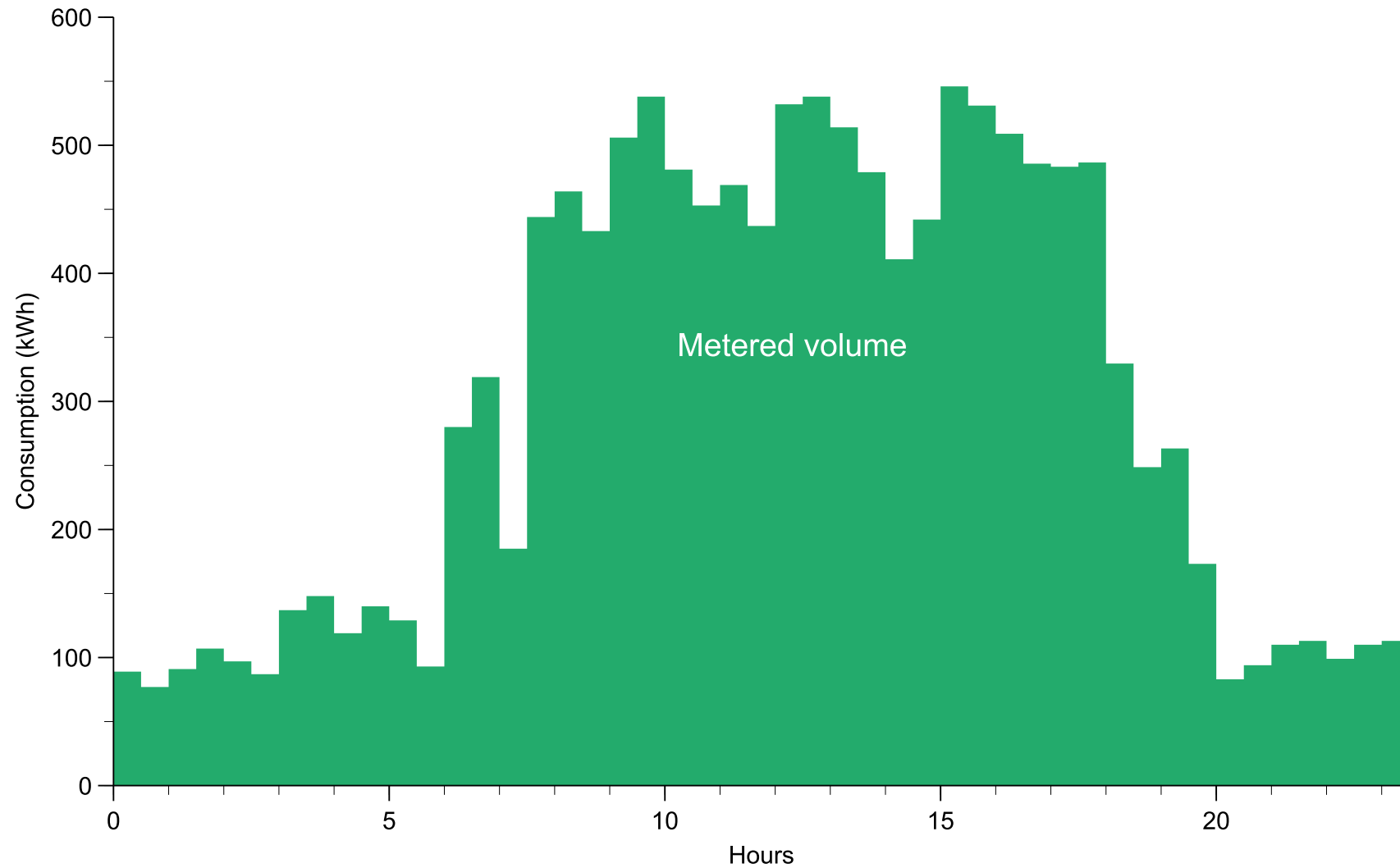
11 December 2018

Version 1.0

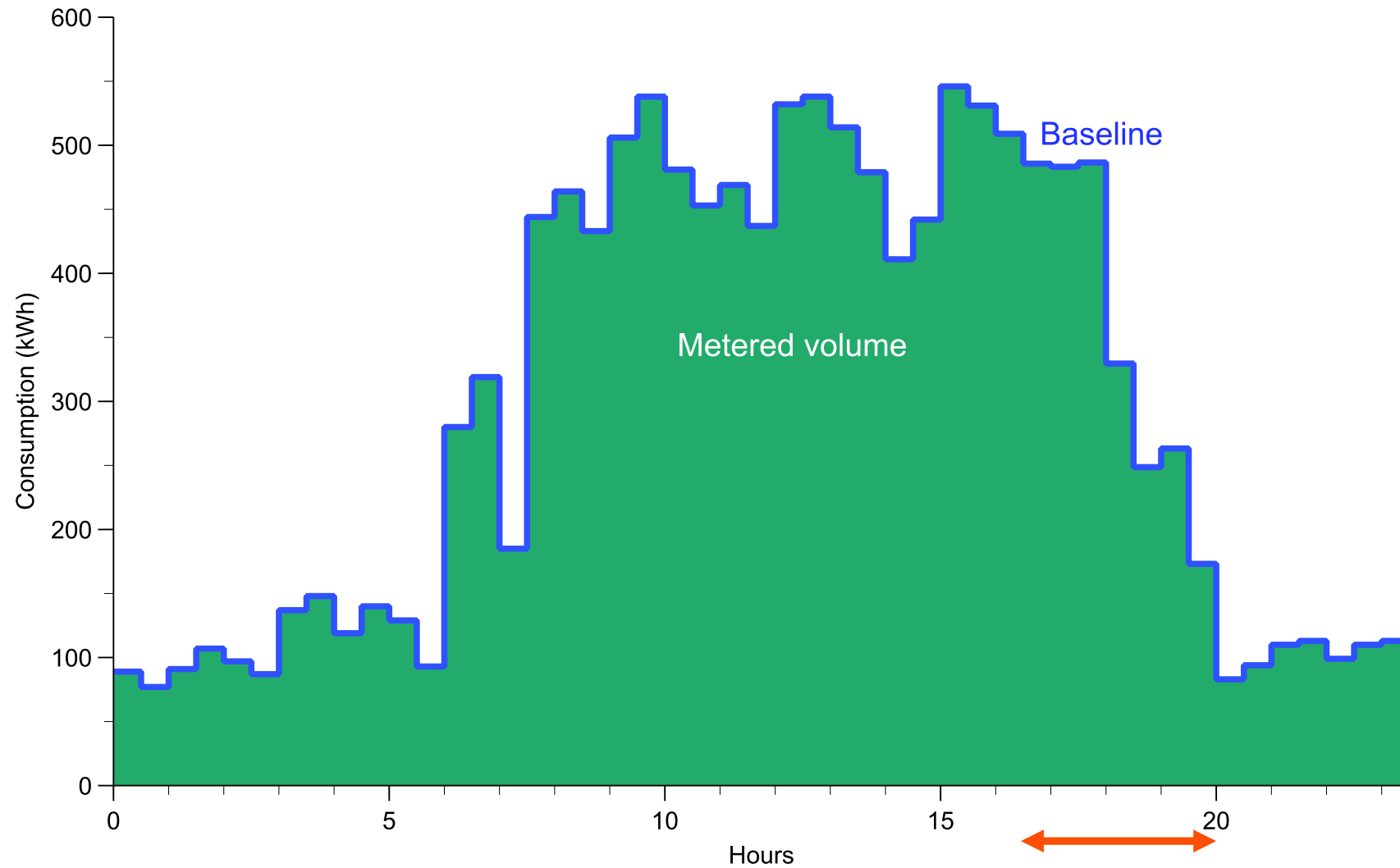
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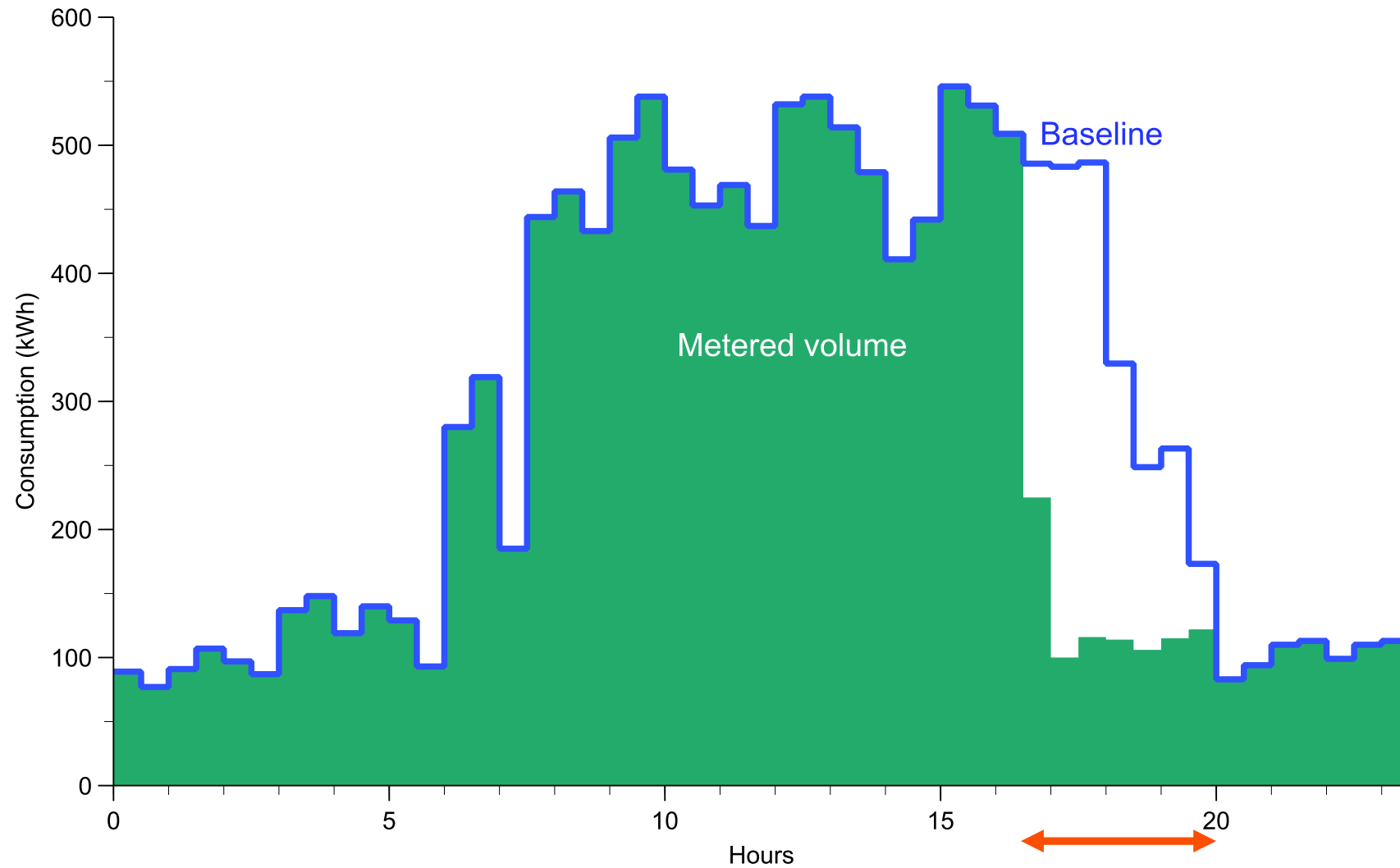
Early shut-down example



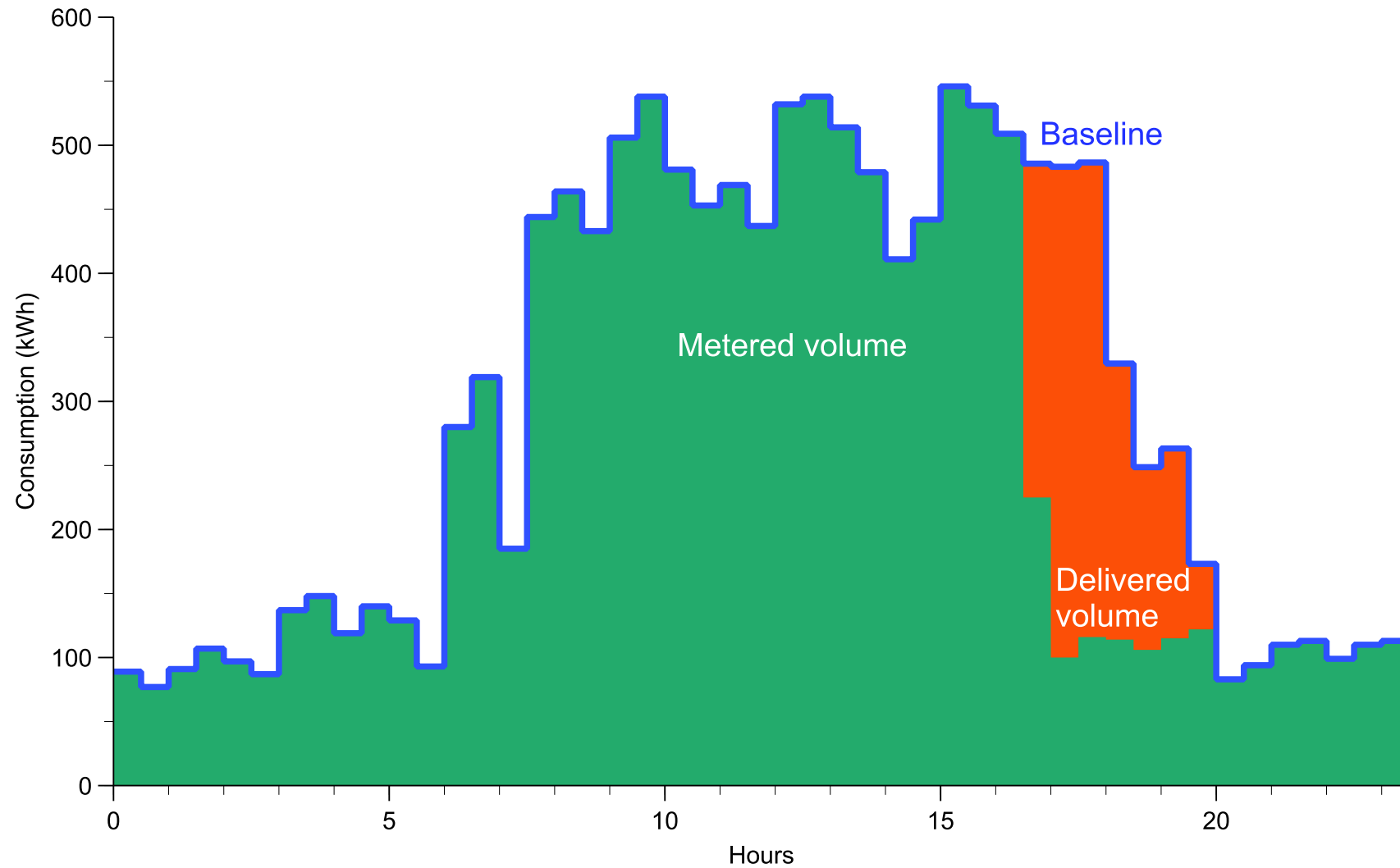
Early shut-down example



Early shut-down example



Early shut-down example

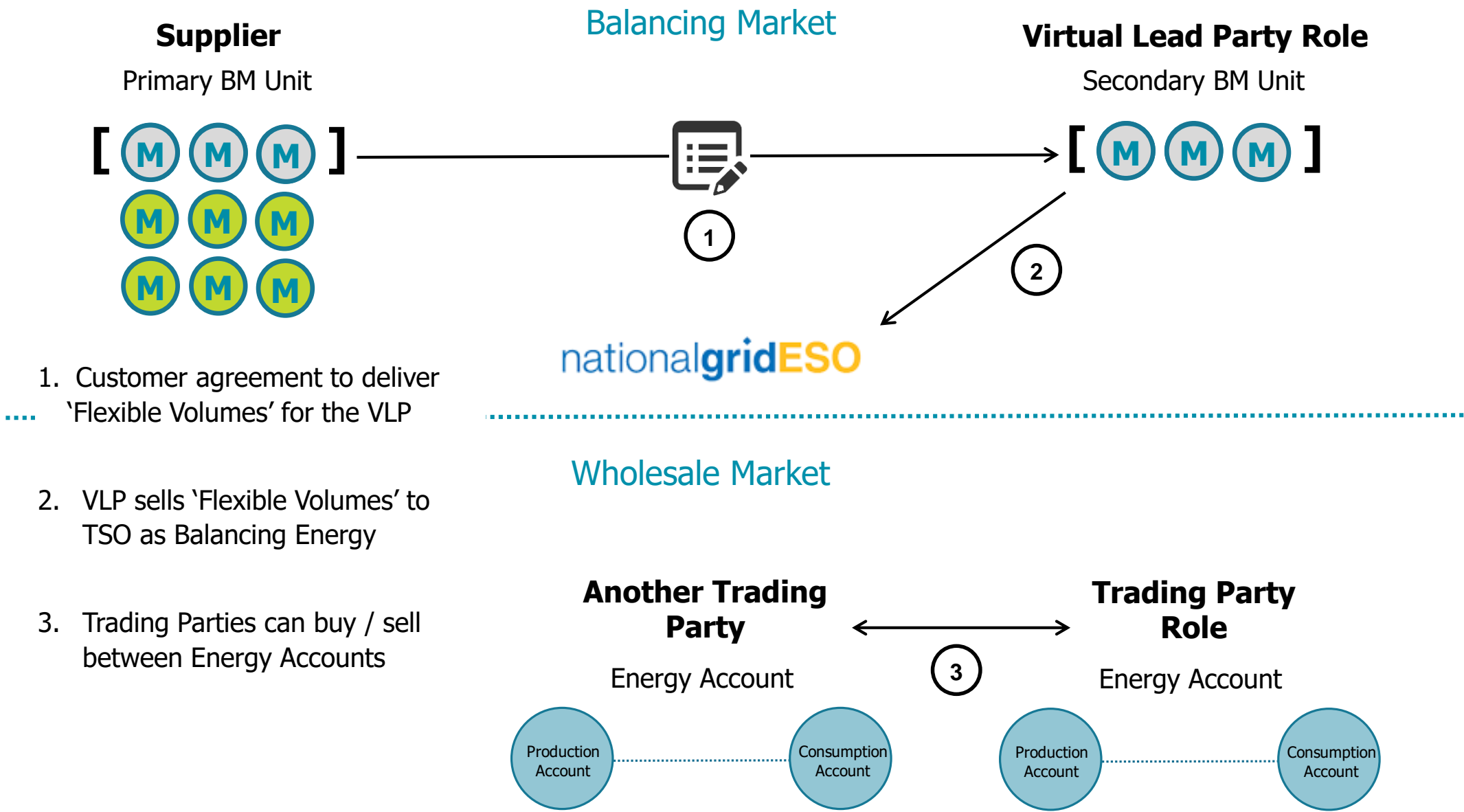


Impact of the Modification on the Relevant Objectives:	
Relevant Objective	Identified impact
a) The efficient discharge by the Transmission Company of the obligations imposed upon it by the Transmission Licence	Neutral
(b) The efficient, economic and co-ordinated operation of the National Electricity Transmission System	Positive
(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	Positive
(d) Promoting efficiency in the implementation of the balancing and settlement arrangements	Neutral
(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]	Positive
(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	Neutral
(g) Compliance with the Transmission Losses Principle	Neutral

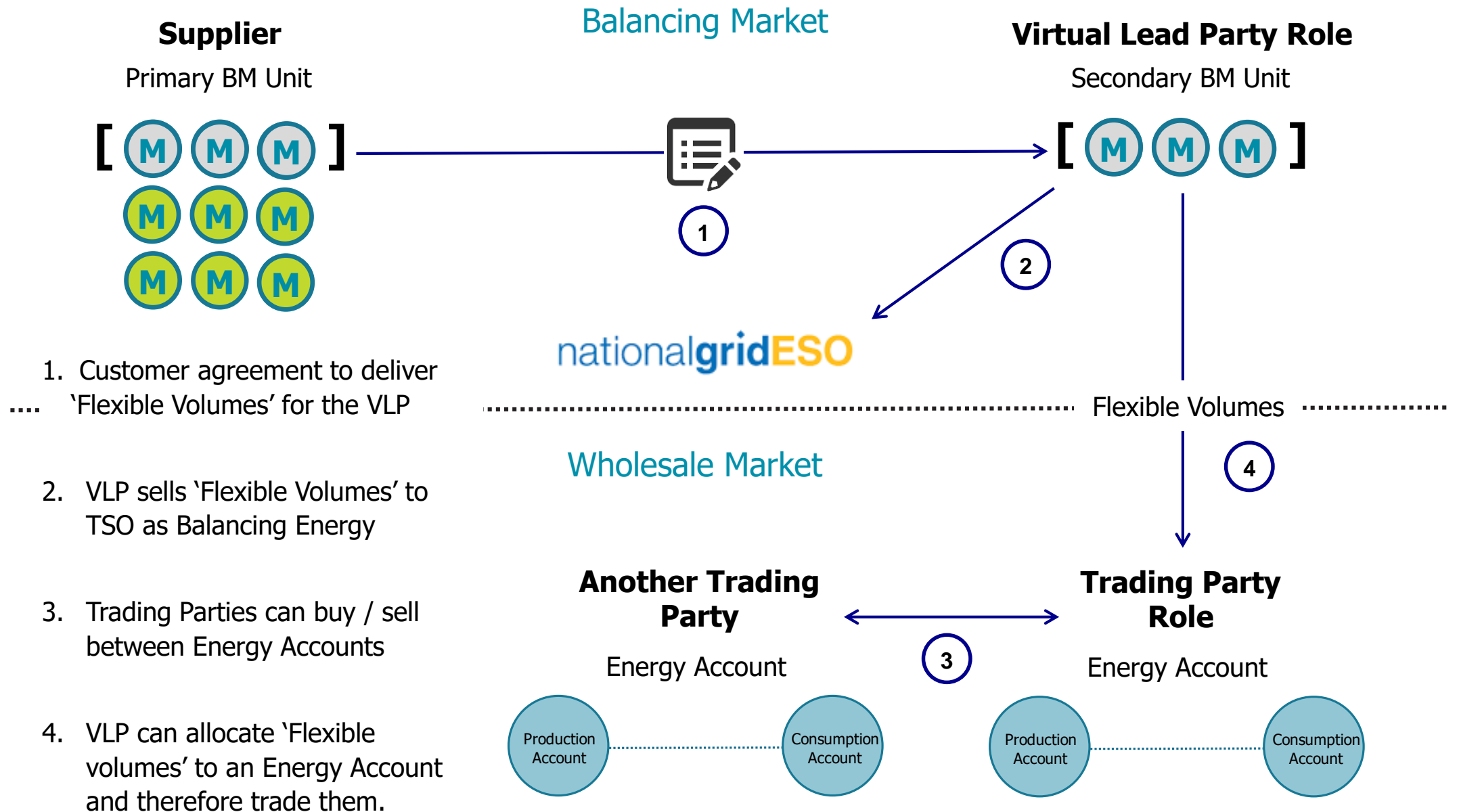


P415 WORKED EXAMPLE

P415: Current VLP Arrangements



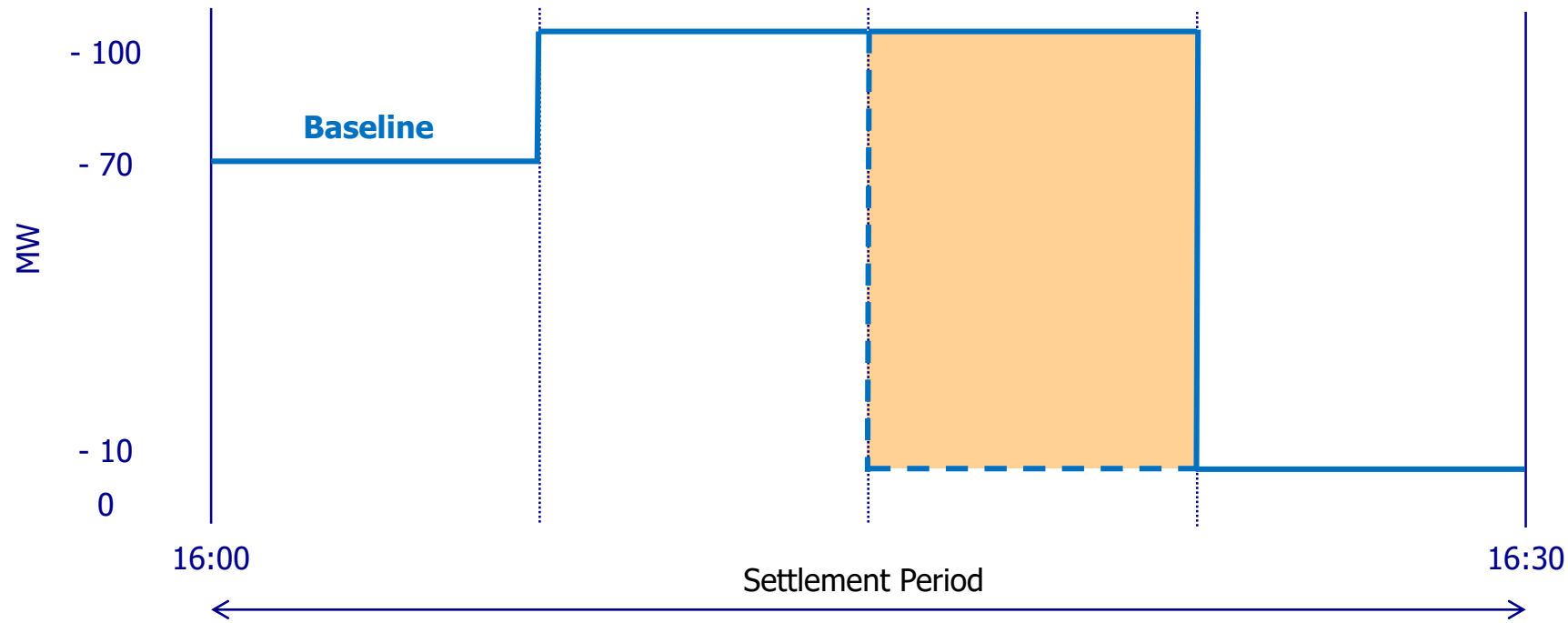
P415: Proposed VLP Arrangements



P415 Simple Working Example: Early Shutdown - VLP

- Projected Boundary Point consumption using baseline is - 35 MWh
- VLP enacted an Early Shutdown -> I.e. reduced demand / increased generation at site
 - Metered consumption at Boundary Point post event was - 23.75 MWh
 - Therefore it's reasonable to allocate VLP the deviation of 11.25 (-23.75 – (-35)) as the delivered 'Flexible Volume' (FM_{ij})

$$FM_{ij} = \text{Metered Volume} - \text{Baseline}$$



Note that within SAA:

- consumption / demand is recorded as a negative number
- generation is recorded as a positive number

P415 Simple Working Example: Early Shutdown - Supplier

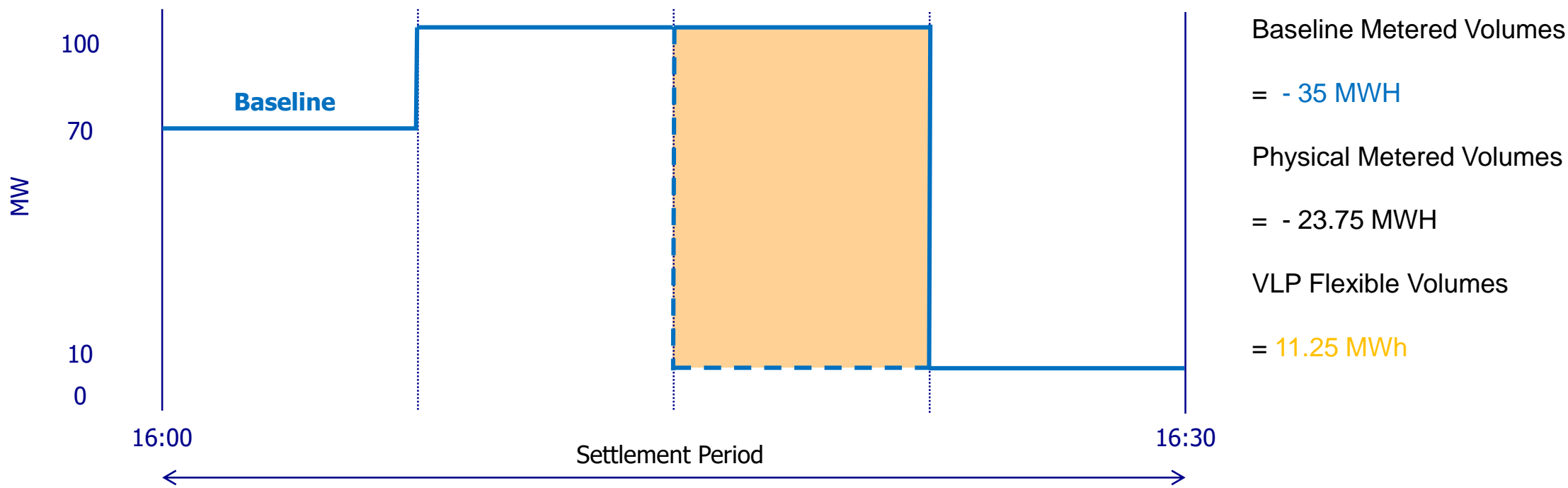
The 'Flexible Volumes' delivered by a VLP will change consumption at the SVA site and so impact the registered Supplier

The P415 solution shall adjust the supplier to ensure they are not adversely (or positively) affected with regards to Imbalance Settlement

This aligns to the principle that Credited Energy Volumes at site level (i.e. Supplier & VLP) should net and reflect the physical metering.

So if allocate 11.25 volume to a VLP then the Supplier needs to be adjusted accordingly

$$\begin{aligned}\text{Supplier Credit Energy Volume} &= \text{Metered Volume} - \text{VLP Flexible Volume} \\ &= -23.75 - 11.25 \\ &= -35\end{aligned}$$



P415 Simple Working Example: Early Shutdown - VLP

VLP who trade in the wholesale market shall have Energy Accounts and therefore are liable for Imbalance Volumes

$$\text{Imbalance Volume} = \text{Credited Energy Volumes} * - \text{Balancing Energy Volumes} - \text{Bilateral Contract Volume}$$

If we assume that VLP has Bilateral Contract Volume for all the Flexible volumes in the example then:

$$\text{Imbalance Volume} = 11.25 - 0 - 11.25 = 0$$

Results in no charge via
Imbalance Cashflow



* The calculated Credited Energy Volumes for a VLP will represent Flexible Volumes rather than Metered Volumes

P415 Simple Working Example: Early Shutdown - VLP

VLP who trade in the wholesale market shall have Energy Accounts and therefore are liable for Imbalance Volumes

$$\text{Imbalance Volume} = \text{Credited Energy Volumes}^* - \text{Balancing Energy Volumes} - \text{Bilateral Contract Volume}$$

If we assume that VLP has no Bilateral Contract Volume for all the Flexible volumes in the example then:

$$\text{Imbalance Volume} = 11.25 - 0 - 0 = 11.25$$

Results in £ credit to VLP
via Imbalance Cashflow

(Positive Imbalance Price)



* The calculated Credited Energy Volumes for a VLP will represent Flexible Volumes rather than Metered Volumes

P415 Simple Working Example: Early Shutdown - VLP

VLP who trade in the wholesale market shall have energy accounts and therefore are liable for Imbalance Volumes

$$\text{Imbalance Volume} = \text{Credited Energy Volumes}^* - \text{Balancing Energy Volumes} - \text{Bilateral Contract Volume}$$

If we assume that VLP has not delivered on their Bilateral Contract Volumes in the example then:

$$\text{Imbalance Volume} = 0 - 0 - 11.25 = - 11.25$$

Results in £ debit to VLP
via Imbalance Cashflow

(Positive Imbalance Price)



* The calculated Credited Energy Volumes for a VLP will represent Flexible Volumes rather than Metered Volumes

P415 Simple Working Example: Early Shutdown - Supplier

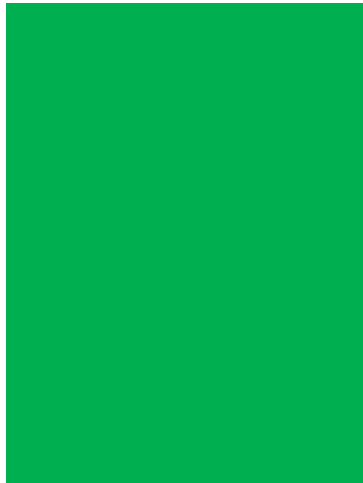
From a Supplier perspective they should not adversely (or positively) be affected with regards to Imbalance Settlement by VLP activity

$$\text{Imbalance Volume} = \text{Credited Energy Volumes}^* - \text{Balancing Energy Volumes} - \text{Bilateral Contract Volume}$$

If we assume that Supplier has Bilateral Contract Volume for all the baseline volumes then in the example then:

$$\text{Imbalance Volume} = -35^* - 0 - (-35) = 0$$

Results in no charge via
Imbalance Cashflow



* The calculated Credited Energy Volumes for a Supplier will include an adjustment for VLP activity

$$= \text{Metered Volume} - \text{VLP Flexible Volume}$$

$$= -23.75 - 11.25 = -35$$

P415 Consequential Considerations - VLP

Additional Costs

As Settlement shall calculate Credited Energy Volumes (i.e. Flexible Volumes) for VLPs they will therefore become liable for:

- Residual Cashflow Reallocation Cashflow (RCRC) as the VLP will have Residual Cashflow Reallocation Proportion (RCRP) calculated
- BSC Cost Recovery (Section D) as the VLP will have Main / General Funding Shares calculated

Credit Requirements

Trading Parties who are liable for Imbalance Charges pose a risk to other Market Participants in regards to debt. This is because Settlement invoices are issued after the Settlement Day (the first invoice is sent at SF + 16 WD).

Therefore VLP shall have to lodge appropriate Credit as collateral in case they are unable to pay any accrued debt.

However due the nature of the volumes they are trading we are unable to forecast Flexible Volumes and so VLP shall be liable to lodge Credit for the entirety of any Bilateral Contract Volumes.

P415 Discussion Points

- Supplier role in the market perceived to be diminished – could be viewed as no longer having full control or responsibility for flow of energy at site boundary
- How to measure a 'flexible volume' deviations accurately
- Supplier lost revenue / billing arrangements
- Transparency / reporting arrangements
- REMIT implications
- P375: Metering Behind the Boundary Point
- P376: Utilising a Baseline Methodology to set Physical Notifications



P415 TERMS OF REFERENCE

P415 Workgroup Terms of Reference (1 of 2)

- a) 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)
- b) Whether the BSC should include a mechanism for compensating Suppliers for adjustments to their imbalance position (and, if so, the appropriate price)
- c) Consideration of commercial impacts on Supplier business models;
- d) Consideration of interactions with licensing around physical trading versus non-physical trading;
- e) Can power be bought at the site through P415 and if so, who pays the third party charges/BSUoS charges;
- f) Will VLP's be able to set their Final Physical Notifications (FPNs) to 'No' if P415 is implemented;
- g) Consider models using just operational metering and models using baselining with operational metering;

P415 Workgroup Terms of Reference (2 of 2)

- h) How will P415 impact the BSC Settlement Risks?
- i) What changes are needed to BSC documents, systems and processes to support P415 and what are the related costs and lead times? When will any required changes to subsidiary documents be developed and consulted on?
- j) Are there any Alternative Modifications?
- k) Should P415 be progressed as a Self-Governance Modification?
- l) Does P415 better facilitate the Applicable BSC Objectives than the current baseline?
- m) Does P415 impact the EBGL provisions held within the BSC, and if so, what is the impact on the EBGL Objectives?



NEXT STEPS

P415: Next Steps

- Elexon to progress any actions from this Workgroup meeting and look to develop a 'straw man' P415 solution.
- Further discussion of more complex examples, market participant impacts and underlying principles at next meetings.
- The Panel approved a 16 month Assessment period for P415 (Assessment Report in April 2022). The proposed timeline would bring it back significantly earlier but is subject to change and emerging requirements.

P415: Next Steps

Event	Date
Present IWA to Panel	8 October 2020
Workgroup meeting 1	11 December 2020
Workgroup meeting 2	W/C 10 February 2020
Workgroup meeting 3	W/C 15 March 2021
Workgroup meeting 4	W/C 17 May 2021
Assessment Procedure Consultation	31 May – 25 June 2021
Workgroup meeting 5	W/C 5 July 2021
Present Assessment Report to Panel	12 August 2021
Report Phase Consultation	16 August – 30 August 2021
Present Draft Modification Report to Panel	9 September 2021
Issue Final Modification Report to Authority	13 September 2021