P305 'Electricity Balancing Significant Code Review Developments'

P305 proposes to progress and implement the conclusions to the Electricity Balancing Significant Code Review, which will put in place a single, marginal imbalance price, introduce Reserve Scarcity Pricing and introduce pricing for Demand Control actions.

This Impact Assessment for P305 closes:

5pm on **Friday 26 September 2014**

The Workgroup may not be able to consider late responses.

This Modification is expected to impact:

- BSC Trading Parties
- Distributors
- Data Aggregators (HHDAs/NHHDAs)
- Half Hourly Data Collectors (HHDCs)
- The Transmission Company
- The Balancing Mechanism Reporting Agent (BMRA)
- The Settlement Administration Agent (SAA)
- The Supplier Volume Allocation Agent (SVAA)
- The Central Data Collection Agent (CDCA)
- ELEXON

Consequential changes are anticipated to:

- *The Grid Code*
- *The Data Transfer Catalogue (DTC)*

ELEXON

What stage is this document in the process?

01 Initial Written Assessment

02 Definition Procedure

03 Assessment Procedure

04 Report Phase

Contents

About This Document

This document is the Impact Assessment for P305. It summarises the proposed P305 solutions requirements developed by the P305 Workgroup, and summarises the changes – to the extent the Workgroup has been able to identify them – that will be required to participants' systems, BSC Central Systems, Code Subsidiary Documents and Configurable Items to implement each of the proposed solutions to P305.

We are issuing this document for impact assessment by BSC Agents (AMD service provider and BPO service provider), the Transmission Company, BSC Parties and Party Agents in order to establish the impacts, costs and lead times of P305 (including any impacts which are not identified in this document) for the various possible solutions.

This Impact Assessment seeks to identify the direct impacts on your organisation should P305 be implemented. At this stage the Workgroup is not seeking your views on the pros or cons of P305, as these will be the subject of a subsequent industry consultation.

Please provide your response using the attached response form (Attachment A). The P305 Workgroup will consider your response at its next meeting.

Any questions?

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1 Why Change?

What is imbalance pricing?

Imbalance pricing (also known as "cash-out") is a key part of the wholesale trading arrangements in Great Britain.

The wholesale electricity market is set up such that BSC Parties enter into bilateral contracts with each other in order for generators to be able to sell the energy they produce to Suppliers to supply their customers. For any given half hour Settlement Period, Parties may trade with each other up to a point one hour beforehand, known as Gate Closure. Parties will aim to balance their position for a given Settlement Period at this time such that the amount of energy they generate or buy matches the amount of energy they consume or sell. However, there are circumstances where this does not happen, such as a generator experiencing an unexpected outage that does not allow them to generate the expected amount of energy, or a Supplier over- or under-estimating the amount of demand their customers actually use. This leaves the Party in a position of imbalance.

Following Gate Closure, the Transmission Company will assess the amount of planned generation and the amount of demand expected for the Settlement Period, and will take actions to balance the system such that the total amount generated matches the total amount consumed. It does this in the Balancing Mechanism (BM) by accepting Bids and Offers submitted by participants, usually generators, to increase or decrease the amount of energy they will produce (or consume) to ensure the system is balanced. It will also take actions outside the Balancing Mechanism, such as the use of Short Term Operating Reserve (STOR). It will do this up to and throughout the Settlement Period to ensure the system is balanced at all times.

Following the end of a Settlement Period, ELEXON will compare the amount of energy each Party contracted with its metered volumes for the Settlement Period, accounting for any balancing actions. Any surplus or shortfall that the Party has is paid for using the relevant imbalance price:

- If the Party is **short** (it consumed or sold more energy than it generated or bought) then it pays for its shortfall at the **System Buy Price** (SBP).
- If the Party is **long** (it generated or bought more energy than it consumed or sold) then it is paid for its surplus at the **System Sell Price** (SSP).

There are two methods for calculating the imbalance price:

- The **Main Price** is based on the Bids and Offers accepted by the Transmission Company for that Settlement Period.
- The **Reverse Price** is based on the market price of electricity for that Settlement Period.

Which method (Main or Reverse) is applied to which imbalance price (SBP or SSP) is determined by whether the system as a whole was long (the Net Imbalance Volume (NIV) was zero or negative) or short (the NIV was positive) in that Settlement Period:

- If the system is long, the SSP will be the Main Price and the SBP will be the Reverse Price.
- If the system is short, the SBP will be the Main Price and the SSP will be the Reverse Price.

What are Bids and Offers?

Bids and Offers are submitted by Parties to the Transmission Company, proposing to increase or reduce generation or demand in exchange for payment. The Transmission Company will accept these as required to balance the system.

Bids are proposals to reduce generation or increase consumption.

Offers are proposals to increase generation or reduce consumption.

Imbalance Pricing Guidance Note

More detail on imbalance prices and how they are calculated can be found in our Imbalance Pricing Guidance Note.

As a result, the Main Price is applied to any Party whose imbalance contributed to the overall system imbalance, who will therefore face the costs of the Bids and Offers accepted to resolve that imbalance. Conversely, the Reverse Price is applied to any Party whose imbalance helped to reduce the overall system imbalance, who will therefore face a price that reflects what it would have incurred had it traded out its position ahead of time.

What is the Electricity Balancing Significant Code Review?

In August 2012, Ofgem launched its Electricity Balancing Significant Code Review (SCR) (EBSCR) to look at imbalance prices, in order to address long-standing concerns that it had raised in 2010 within its Project Discovery report. In particular, Ofgem expressed concerns that imbalance prices are not creating the correct signals for the market to balance, which could increase the risks to future electricity security of supply and undermine balancing efficiency, unnecessarily increasing costs.

Ofgem published its Final Policy Decision on 15 May 2014. Its final decision document lays out its conclusions and builds on the extensive analysis and stakeholder engagement it has conducted during the EBSCR.

What is Ofgem's rationale for reform?

In its Final Policy Decision, Ofgem lays out its rationale for why reform of imbalance prices is needed. In it, it notes that the actions of the Transmission Company in balancing the system in real time is the basis for the calculation of imbalance prices, and considers that a number of factors currently dampen these prices:

- Prices are calculated using an average of the most expensive (to the Transmission Company) 500MWh of Bids or Offers taken to balance the system, rather than the most marginal action (the energy balancing action with the highest cost to the Transmission Company).
- Prices do not include the costs to consumers of involuntary Demand Disconnections (blackouts) and Voltage Reductions (brownouts).
- The way reserve capacity is costed does not allow imbalance prices to rise to reflect tight margins (defined as the amount of surplus capacity available at any given time over the volume of expected demand at that time).

Additionally, the current dual imbalance price system creates unnecessary balancing costs, disadvantaging in particular smaller Parties.

Ofgem considers that the shortcomings with the current arrangements mean that the market does not sufficiently value flexibility (the ability to ramp generation or demand up or down quickly in response to changing market conditions). As a consequence, market participants have insufficient incentives to provide flexible capacity (such as flexible generation, demand response services and storage) to meet demand. Shortcomings may also make it more likely that Interconnectors export at times of system stress or import less than under more efficient arrangements. As the share of intermittent generation grows, flexibility will only become more important for security of supply.

Ofgem believes that imbalance price arrangements and the government's planned Capacity Market (CM) have distinct but complementary roles in seeking to ensure electricity security of supply. The CM is intended to address longer term capacity adequacy

What is a Significant Code Review?

A Significant Code Review is an Authority-led review process on an area of work which the Authority considers:

- has a significant impact on the Authority's principal objective, statutory functions or relevant obligations imposed by European Union law; and in particular:
  - has significant impacts on consumers or competition; and/or
  - has significant impacts on the environment, security of supply or sustainable development; or
- creates significant cross code or cross licence issues.

by providing capacity providers with a secure revenue stream for their investment. Reform of imbalance prices complements this by providing efficient signals of the value of flexibility, influencing the type of capacity coming forward. In addition, imbalance prices have the potential to reduce the cost of procuring capacity in the CM auction.

What is the issue?

Upon completion of an SCR, the Authority may, under BSC Section F5.3, issue a direction to the Transmission Company to raise an SCR Modification Proposal to progress the outcomes.

On 15 May 2014, Ofgem, as the Authority, issued such a direction to National Grid, as the Transmission Company, to raise two such Modifications to progress the conclusions of the EBSCR. P304 'Reduction in PAR from 500MWh to 250MWh' has been raised to progress a change to the Price Average Reference (PAR) value ahead of the winter 2014/15 season. P305 'Electricity Balancing Significant Code Review Developments' has been raised to progress the remainder of the EBSCR's proposed changes ahead of the winter 2015/16 season.

2 Proposed Solutions

Proposer's proposed solution

P305 proposes to progress the reforms outlined by the Authority arising from the EBSCR. These reforms have been split into four areas:

- reductions in the PAR value;
- moving to a single imbalance price;
- the introduction of Reserve Scarcity Pricing; and
- the introduction of pricing for Demand Control actions.

The full detail on each area of reform and the rationale behind them can be found in Ofgem's Final Policy Decision. The detailed requirements for each area can be found in Section 4. A summary diagram of the changes proposed by P305 can be found in Appendix 1.

Reductions in the PAR value

P304 proposes to reduce the PAR value from its current level of 500MWh to 250MWh ahead of the winter 2014/15 season. P305 will build on this, and proposes to reduce the PAR value further to 50MWh upon implementation, with a final step-change to 1MWh ahead of the winter 2018/19 season.

P305 will also reduce the value of the Replacement Price Average Reference (RPAR) value from its current level of 100MWh to 1MWh upon implementation.

These changes will make the imbalance price more marginal, as only the most expensive 1MWh of actions would be used to set the price.

Moving to a single imbalance price

A single imbalance price will be applied in place of the dual imbalance prices currently in use. Both the SBP and SSP will be retained, but they will be set equal to each other, with that single price being calculated using the Main Price methodology.

Introduction of Reserve Scarcity Pricing

Both accepted BM and non-BM STOR actions will be included in imbalance prices, with a price which is the greater of the utilisation price for that action or a new Reserve Scarcity Pricing (RSP) function price. The RSP function will be based on the prevailing scarcity of the system, and would be calculated as the product of two new values:

- the Loss of Load Probability (LoLP), which will be calculated by the Transmission Company at Gate Closure for a given Settlement Period; and
- the Value of Lost Load (VoLL), as outlined below.

STOR availability costs would be removed from the Buy Price Adjustment (BPA) calculation.

What is PAR and RPAR?

The **PAR** volume is a set volume of the most expensive balancing actions remaining at the end of the Main Price calculations, and is currently 500MWh. The volume-weighted average of these actions is used to produce the Main Price. This is referred to as PAR Tagging.

The **RPAR** volume is a set volume of the most expensive priced actions remaining at the end of the Main Price calculations, and is currently 100MWh. The volume-weighted average of these actions, known as the Replacement Price, is used to provide a price for any remaining unpriced actions prior to PAR Tagging.

Introduction of pricing for Demand Control actions

The volumes of any disconnections and voltage reduction instructed by the Transmission Company ("System Operator (SO) instructed Demand Control actions") would be included in the imbalance price calculation at a price referred to as the VoLL price. This price would be set to £3,000/MWh upon implementation, rising to £6,000/MWh by the winter 2018/19 season.

An estimate of the volume would be calculated using a 'top-down' approach for use in the indicative values published on the Balancing Mechanism Reporting Service (BMRS) and the Interim Information Settlement Run (II). A more accurate 'bottom-up' approach will be used for the Initial Settlement Run (SF) and all subsequent Settlement Runs, which will entail identifying the individual consumers affected and estimating what they would have consumed had the disconnection not taken place.

Participants' imbalance positions would be adjusted for Demand Disconnection actions. At this stage, a method for adjusting volumes in response to Voltage Reduction actions has not been developed; this will be progressed separately to P305.

Workgroup's alternative solutions

At this stage, the Workgroup agrees with all aspects of the Proposer's proposed solution for the PAR, single price and RSP areas of the Modification. However, the Workgroup has proposed alternative options for three aspects of the Demand Control area, as summarised below:

- The Workgroup disagrees with the proposal to allow the Authority to direct a change to the VoLL value, and instead believes that an annual review process should be introduced, which can be triggered by the Panel upon the request of the Authority. The Workgroup and Ofgem are currently exploring how these views can be addressed. In either case, BSC Parties will be able to separately raise a Modification to propose a change to the value, which would progress through the normal BSC Modifications process. This is covered under Requirement D1 in Section 4.
- Some members of the Workgroup disagree with the proposal to replace the 'top-down' volume with the 'bottom-up' volume in the imbalance price calculations, and would prefer to use the 'top-down' volume at all Settlement Runs for consistency with other actions such as Bid-Offer Acceptances (BOAs). However, the 'bottom-up' method would still be used to correct participants' imbalance positions. This is covered under Requirement D9 in Section 4.
- The Workgroup is currently considering three options for the 'bottom-up' process for correcting Non Half Hourly (NHH) Supplier volumes following a Demand Control event. Following completion of this Impact Assessment and parallel analysis on the accuracy of each approach, the Proposer and the Workgroup will agree the best method to progress. This is covered under Requirement D7 in Section 4.

Implementation approach

In its Final Policy Decision, Ofgem highlights that it seeks its proposed reforms to be implemented as part of the November 2015 BSC Systems Release, which will go live on 5 November 2015, to introduce these changes ahead of the winter 2015/16 season. It therefore strongly urges the industry to facilitate this approach to the best of its ability.

3 Summary of Likely Impacts

What does this Impact Assessment seek?

This Impact Assessment seeks to identify the full impacts of the proposed solutions to P305 in order to assess the likely costs and lead time required to implement the solutions that have been put forward. Please respond using the accompanying Impact Assessment response form in Attachment A.

Please identify all impacts on your organisations required to implement P305 (i.e. all activities, such as system or process changes, that would need to be completed before the P305 Implementation Date) and the costs and lead times that you would require to implement these changes. Where applicable, please also list consequential impacts and costs that would arise as a result of P305 but which would not impede its implementation (such as the longer-term impacts on your trading or imbalance position management), but these should be kept separate from your direct implementation impacts, costs and lead times.

Where applicable, we seek separate information on the costs and lead time for all proposed options where these would have different impacts on your organisation.

Any information you provide can be treated as confidential if you wish, but all information will be shared with the Authority. Please state in your response whether you would also like the information to be kept confidential from the Workgroup and the Panel or whether you are happy for your response to be shared with them (if you do not explicitly state then we shall assume the former). Please note that any information withheld from the Workgroup and the Panel would not be able to be taken into account by them when they consider the impacts, costs and lead time for P305 and whether it better facilitates the Applicable BSC Objectives. No confidential information will be shared with the wider industry.

The Workgroup also welcomes your views on which of the options under Requirements D1, D7 and D9 you believe should be progressed, and whether there are any other potential solutions that you believe the Workgroup should consider.

At this stage **the Workgroup is not seeking your views on the pros or cons of P305 or whether you believe it should be approved or rejected**. These will be the subject of the Workgroup's subsequent Assessment Procedure Consultation once it has agreed which solution or solutions to progress.

Who is likely to be impacted by P305?

P305 is expected to impact the following participants in the following ways:

- **BSC Trading Parties** are not expected to be directly impacted by any Requirements and so should not require any mandatory effort in implementing P305; all aspects of calculating imbalance prices are done centrally so participants' systems should only be impacted if they have elected to replicate any of these processes or related parameters within their systems, which is optional. All Trading Party impacts are anticipated to be consequential impacts arising from the new arrangements, such as behavioural changes or changes to imbalance costs. **Suppliers** may want to receive some or all of the new data flows proposed under Requirements D6 and D7 for Demand Control events, but this has not been assumed or provided for in the Requirements.

- **Distributors** will be involved in the 'bottom-up' approach for correcting participants' imbalance positions following a Demand Control event. Distributor impacts are covered under Requirements D4 and D5. No other part of P305 is expected to impact Distributors.
- **Party Agents**, specifically **Half Hourly and Non Half Hourly Data Aggregators** (HHDAs/NHHDAs) and **Half Hourly Data Collectors** (HHDCs), will be involved in the 'bottom-up' approach for correcting participants' imbalance positions following a Demand Control event. Party Agent impacts are covered under Requirements D4 to D7. No other part of P305 is expected to impact Party Agents.
- The **Transmission Company** will be required to calculate indicative and final LoLP values for each Settlement Period, and will be required to notify BSC Agents of STOR actions and Demand Control events and any necessary data that BSC Agents will require to include these in the imbalance price calculations. The Transmission Company impacts are covered under Area C and Requirements D2, D5 and D8. No other part of P305 is expected to impact the Transmission Company.
- **BSC Agents**, specifically the **Balancing Mechanism Reporting Agent** (BMRA), the **Settlement Administration Agent** (SAA), the **Supplier Volume Allocation Agent** (SVAA) and the **Central Data Collection Agent** (CDCA), will be required to implement and subsequently operate the new arrangements. P305 will impact both the Application Management and Development (AMD) service provider and the Business Process Outsourcing (BPO) service provider, and all four Areas of P305 will impact at least one BSC Agent.
- **ELEXON** will be impacted through the implementation of the new arrangements and the corresponding document changes as well as ensuring that any business-as-usual processes are adapted accordingly. The **Electricity Market Reform Service** (EMRS) section of ELEXON will also be involved in the 'bottom-up' approach for correcting participants' imbalance positions following a Demand Control event, the impacts of which are covered under Requirement D8.

Requirements with multiple options

Three Requirements (D1, D7 and D9) have more than one variant to represent different options being proposed by the Workgroup. The participants impacted by these Requirements are summarised in the following table:

Requirements With Multiple Options		
Requirement	Participants Impacted	Anticipated Difference in Implementation Effort
D1	AMD service provider ELEXON	None – the two proposed options differ only in the processes to follow for proposing a change to the VoLL value
D7	Party Agents AMD service provider BPO service provider	Significant – the three proposed options have considerable differences in impacts both on participants and systems

Requirements With Multiple Options		
Requirement	Participants Impacted	Anticipated Difference in Implementation Effort
D9	AMD service provider BPO service provider	Minimal – the two proposed options differ only in whether the volume used for Demand Control actions changes at the SF Settlement Run

There are six likely variants of these options:

- Three variants consisting of the Proposer's preferred approaches to Requirements D1 and D9 with each of the three options under Requirement D7; and
- Three variants consisting of the Workgroup's preferred approaches to Requirements D1 and D9 with each of the three options under Requirement D7.

AMD service provider and BPO service provider

We anticipate the AMD service provider and the BPO service provider to be impacted differently by all three Requirements, and so we request you impact assess each of the below variants separately, stating in your response where two or more variants would have the same impacts, costs or lead times.

Requirement Variants							
Variant	D1p	D1a	D7x	D7y	D7z	D9p	D9a
Proposed with Option 1	✓		✓			✓	
Proposed with Option 2	✓			✓		✓	
Proposed with Option 3	✓				✓	✓	
Alternative with Option 1		✓	✓				✓
Alternative with Option 2		✓		✓			✓
Alternative with Option 3		✓			✓		✓

Party Agents

We anticipate Party Agents to be impacted differently only by Requirement D7, and so we request you impact assess each of the three options separately, stating in your response where two or more options would have the same impacts, costs or lead times.

Other respondents

We do not anticipate any other respondent being impacted differently by any of these three Requirements, and so we expect only a single response from these respondents.

What else is likely to be impacted by P305?

P305 is expected to impact a significant number of BSC-related documents, including Section Q, Section T and Section X Annex X-1 of the BSC, various Service Descriptions and User Requirement Specification (URS) documents and the Interface Definition and Design (IDD) documents. In addition, the LoLP Calculation Statement document will be created by P305 as a new Code Subsidiary Document (CSD) to the BSC. For the purpose of this Impact Assessment, you should assume that the BSC Section changes will be drafted and consulted upon prior to the final decision on P305, with all other document changes being drafted and consulted upon as part of the implementation project should P305 be approved.

P305 will also require consequential changes to the **Data Transfer Catalogue** (DTC) to introduce new DTC data flows for use in the participant imbalance position correction process (Requirements D6 and D7). It should be assumed that the necessary DTC Change Proposals (CPs) will be raised and progressed following the final decision on P305, should P305 be approved.

A consequential change to the **Grid Code** would also be required should P305 be approved in order to update arrangements relating to System Warning notifications relating to Demand Control arrangements (Requirement D2). This would be raised following the final decision on P305, should P305 be approved.

Consequential changes may also be required to the **Balancing Services Adjustment Data (BSAD) Methodology** and **System Management Action Flagging (SMAF) Methodology** documents; these impacts are to be confirmed, and we seek such confirmation as part of this Impact Assessment.

You can find a summary of all expected impacts in Section 5. If you believe there are any additional impacts not identified in this document, please include these as part of your Impact Assessment response.

4 Detailed Requirements

Solution requirements

The proposed solution to P305 comprises of four separate Areas, and the requirements for each have been laid out separately by Area for clarity. However, all four Areas form a single solution and will be implemented at the same time on the relevant Implementation Date, so assessment of the solution should account for synergies between the Areas (e.g. all testing performed in parallel, multiple changes to one system etc.).

The four Areas are:

A. PAR value

B. Single imbalance price

C. Reserve Scarcity Pricing

D. Value of Lost Load pricing for Demand Control actions

There are two variants of Requirements D1 and D9, one for the Proposer's proposed solution (suffixed with a 'p') and one for the Workgroup's potential alternative solution (suffixed with an 'a'). There are three variants of Requirement D7 (suffixed with an 'x', a 'y' and a 'z') to represent the three options that the Workgroup is currently considering. All other requirements apply equally to all potential solutions. We expect only BSC Agents and Party Agents to be differently impacted by the options for any given Requirement.

Area A: PAR value

Requirement A1	
The value of PAR will be set to 50MWh.	
A1.1	The SAA (BPO service provider) will set the value of PAR within central systems to 50MWh effective from the P305 Implementation Date. This value will apply to all Settlement Days from the P305 Implementation Date onwards.
A1.2	Participants who store the value of PAR within their internal systems will need to update this value effective from the P305 Implementation Date.

Requirement A2	
The value of RPAR will be set to 1MWh.	
A2.1	The SAA (BPO service provider) will set the value of RPAR within central systems to 1MWh effective from the P305 Implementation Date. This value will apply to all Settlement Days from the P305 Implementation Date onwards.
A2.2	Participants who store the value of RPAR within their internal systems will need to update this value effective from the P305 Implementation Date.

Requirement A3	
The value of PAR will be set to 1MWh effective from 1 November 2018 (November 2018 BSC Systems Release).	
A3.1	The SAA (BPO service provider) will set the value of PAR within central systems to 1MWh effective from 1 November 2018. This value will apply to all Settlement Days from 1 November 2018 onwards.
A3.2	Participants who store the value of PAR within their internal systems will need to update this value effective from 1 November 2018.

Area B: Single imbalance price

Requirement B1	
If the NIV value is greater than zero in a given Settlement Period, the SBP will be calculated in the same way as it is presently and the SSP will be set equal to the SBP.	
B1.1	For any Settlement Period on or after the P305 Implementation Date for which the NIV value is greater than zero, the BMRA (BPO service provider) and the SAA (BPO service provider) will calculate the SBP using the Main Price calculation methodology, including any amendments to this methodology introduced under Areas A, C or D.
B1.2	For any Settlement Period on or after the P305 Implementation Date for which the NIV value is greater than zero, the BMRA (BPO service provider) and the SAA (BPO service provider) will set the SSP to be equal to the SBP.
B1.3	For all Settlement Periods prior to the P305 Implementation Date, the values of SBP and SSP will continue to be calculated according to the current methodologies.
B1.4	Participants who calculate the values of SBP and SSP within their internal systems will need to update these methodologies accordingly effective from the P305 Implementation Date.

Requirement B2	
If the NIV value is less than zero in a given Settlement Period, the SSP will be calculated in the same way as it is presently and the SBP will be set equal to the SSP.	
B2.1	For any Settlement Period on or after the P305 Implementation Date for which the NIV value is less than zero, the BMRA (BPO service provider) and the SAA (BPO service provider) will calculate the SSP using the Main Price calculation methodology, including any amendments to this methodology introduced under Areas A, C or D.
B2.2	For any Settlement Period on or after the P305 Implementation Date for which the NIV value is less than zero, the BMRA (BPO service provider) and the SAA (BPO service provider) will set the SBP to be equal to the SSP.
B2.3	For all Settlement Periods prior to the P305 Implementation Date, the values of SBP and SSP will continue to be calculated according to the current methodologies.
B2.4	Participants who calculate the values of SBP and SSP within their internal systems will need to update these methodologies accordingly effective from the P305 Implementation Date.

Requirement B3	
If the NIV value is equal to zero in a given Settlement Period, the SBP will be set to the Market Price and the SSP will be set equal to the SBP.	
B3.1	For any Settlement Period on or after the P305 Implementation Date for which the NIV value is equal to zero, the BMRA (BPO service provider) and the SAA (BPO service provider) will calculate the SBP as being equal to the Market Price provided under Requirement B4.
B3.2	For any Settlement Period on or after the P305 Implementation Date for which the NIV value is equal to zero, the BMRA (BPO service provider) and the SAA (BPO service provider) will set the SSP to be equal to the SBP.
B3.3	For all Settlement Periods prior to the P305 Implementation Date, the values of SBP and SSP will continue to be calculated according to the current methodologies.
B3.4	Participants who calculate the values of SBP and SSP within their internal systems will need to update these methodologies accordingly effective from the P305 Implementation Date.

Requirement B4	
Market Index Data will be received and the Market Price published on the BSC Website.	
B4.1	Market Index Data Providers will continue to submit Market Index Data (MID) to the BMRA (BPO service provider), the SAA (BPO service provider) and BSCCo as present. The MID to be submitted and published will remain unchanged by P305.
B4.2	For any Settlement Period where the NIV value is equal to zero, the BMRA (BPO service provider) will calculate the Market Price as per BSC Section T4.3A, and will use this as the SBP when calculating the indicative imbalance prices published on the BMRS 15 minutes after the end of that Settlement Period.
B4.3	For any Settlement Period where the NIV value is equal to zero, the SAA (BPO service provider) will calculate the Market Price per BSC Section T4.3A, and will use this as the SBP when calculating the imbalance prices for all subsequent Settlement Runs.
B4.4	For all Settlement Periods, the SAA (BPO service provider) will publish the Market Price calculated under Requirement B4.3 on the ELEXON Portal as soon as reasonably practical after receipt.

Should Market Index Data be removed?

The Workgroup considered removing Market Index Data as part of P305 and using an alternative option when NIV equals zero. However, it notes that Market Index Data is widely used outside the BSC, and that the cost-savings under the BSC from removing Market Index Data (approx. £320k per annum) may be dwarfed by the consequential costs to the industry. The Workgroup believes that the question of whether to keep or remove Market Index Data should be considered separately to P305.

Area C: Reserve Scarcity Pricing

Requirement C1	
A price for any BM or non-BM STOR action will be calculated and submitted into the Main Price calculation.	
C1.1	For each Settlement Period where a BM or non-BM STOR action is taken, the action and an associated volume and price will be included in the Offer Stack of the Main Price calculation.

Requirement C1	
C1.2	The Transmission Company will submit each action with a flag indicating whether it is a STOR action to the BMRA (BPO service provider) for use in the Main Price calculation for the BMRS indicative system imbalance prices no later than 15 minutes after the end of the relevant Settlement Period. The manner and format by which this information will be submitted will be agreed between the Transmission Company and the BMRA.
C1.3	The price of each STOR action will be calculated by the BMRA (BPO Service Provider) as the greater of: • The utilisation price of the STOR action, defined as either the utilisation payment as provided in the service provider's tender or, for BM actions, the submitted Offer price; or • The RSP Price as calculated as a product of the LoLP (as calculated under Requirement C2) and the VoLL Price (as defined under Requirement D1).
C1.4	The BMRA (BPO service provider) will include any STOR actions for a given Settlement Period at the price as calculated under Requirement C1.3 in the calculation of the corresponding indicative imbalance prices published on the BMRS 15 minutes after the end of that Settlement Period.
C1.5	The BMRA (BPO service provider) will publish any STOR actions with the utilisation price, STOR flag and, if applicable, the replacement RSP Price for a given Settlement Period on the BMRS at the same time as it publishes the indicative system imbalance prices for that Settlement Period.
C1.6	The BMRA (BPO service provider) will submit each action and the price as calculated under Requirement C1.3 to the SAA (BPO service provider) in time for the II Settlement Run.
C1.7	The SAA (BPO service provider) will include any STOR actions for a given Settlement Period received under Requirement C1.6 in the calculation of the corresponding imbalance prices in all subsequent Settlement Runs.

Requirement C2	
The Transmission Company will calculate the LoLP value for each Settlement Period.	
C2.1	The Transmission Company will calculate the LoLP for each Settlement Period on or after the P305 Implementation Date in accordance with the LoLP Calculation Methodology Statement established under Requirement C5.
C2.2	The Transmission Company will calculate indicative values of LoLP for a given Settlement Period at the following times, using the data available at that time: • A value will be calculated at 08:00 and 12:00 each calendar day for all Settlement Periods for the next five operational days for which Gate Closure has not yet passed; and • A value will be calculated at 24, eight, four and one hour(s) prior to Gate Closure for each individual Settlement Period.
C2.3	The Transmission Company will calculate a final value of LoLP for each individual Settlement Period at Gate Closure for that Settlement Period, using the data available at that time.

Times for indicative LoLP values

The Workgroup has considered the times that an indicative LoLP should be published for each Settlement Period.

Publishing values at 08:00 will allow participants a few hours to trade day-ahead products on power exchanges before those products close at 11:00.

Publishing values at 12:00 allows these values to account for the data that the Transmission Company receives for the day-ahead calculations it performs each day at 11:00.

Publishing values for the next five operational days allows participants that do not operate round-the-clock to gain an insight into the anticipated LoLP following a weekend.

These times have been reflected in Requirement C2.2. The Workgroup may revise these times later, but it is expected that such revisions would be to reduce the number of times an indicative value is produced.

Requirement C2	
C2.4	The Transmission Company will document the method for calculating a LoLP value in the LoLP Calculation Statement established under Requirement C5. As part of this, it will include any parameters that it will use in the calculation of a LoLP value stating, where applicable, the different values used at each of the time frames for which a value will be calculated for a given Settlement Period.

Requirement C3	
The Transmission Company will submit the LoLP for each Settlement Period to the BMRA.	
C3.1	The Transmission Company will submit all indicative and final values of LoLP calculated under Requirement C2 to the BMRA (BPO service provider) as soon as reasonably practical after calculation but no later than 15 minutes following the point in time at which the value was calculated for.
C3.2	The BMRA (BPO service provider) will publish all indicative and final values of LoLP for each Settlement Period on the BMRS within one minute of receipt from the Transmission Company.
C3.3	The BMRA (BPO service provider) will use the final value of LoLP received from the Transmission Company for a given Settlement Period in the calculation of the corresponding indicative imbalance prices published on the BMRS 15 minutes after the end of that Settlement Period.
C3.4	In the event no final value of LoLP is received in time for the BMRA (BPO service provider) to use in Requirement C3.3, the BMRA will use the most recently calculated indicative value received for that Settlement Period instead.

Requirement C4	
The BMRA will submit the final LoLP for each Settlement Period to the SAA.	
C4.1	The BMRA (BPO service provider) will submit the final value of LoLP for a given Settlement Period to the SAA (BPO service provider) as soon as reasonably practical following receipt from the Transmission Company but in any event in time for the II Settlement Run. If no such value is available in time for the II Settlement Run, the BMRA will submit the value used under Requirement C3.4 instead.
C4.2	The SAA (BPO service provider) will use the final value of LoLP for a given Settlement Period in the calculation of the corresponding imbalance prices in all subsequent Settlement Runs.

Requirement C5	
The LoLP Calculation Statement will be established on the BSC Baseline Statement.	
C5.1	The LoLP Calculation Statement will be established on the BSC Baseline Statement as a Category n/a document, equivalent to the Market Index Definition Statement (MIDS).
C5.2	The BSC Panel will be responsible for maintaining this document. The Panel may delegate this responsibility to an appropriate Panel Committee.

LoLP calculation method

The Workgroup has not developed the LoLP calculation method prior to this Impact Assessment as participants other than the Transmission Company do not need to know the details of the calculation in order to impact assess the P305 solution, only that values will be produced and the times these will be published.

The calculation will be developed by the Workgroup in parallel with this Impact Assessment, and it will consult on its proposed calculation as part of the Assessment Procedure Consultation.

Time of publication for the final LoLP value

The Workgroup has considered the most appropriate time to publish the final LoLP value for a given Settlement Period, with views being this should either be as soon as possible after Gate Closure or alongside the indicative imbalance prices published 15 minutes after the Settlement Period ends. It has proposed the first option, but welcomes your views on this as part of this Impact Assessment.

Requirement C5	
C5.3	All changes to the LoLP Calculation Statement must be approved by the Authority.
C5.4	The LoLP Calculation Statement will be reviewed by the BSC Panel from time to time. The BSC Panel can delegate responsibility for carrying out the review. If carried out under delegated authority, any conclusions to this review and any accompanying recommendations will be put to the Panel for decision. The process for conducting this review will be approved by the Panel, but must include consultation with the industry. Any proposed changes arising from such a review will not be required to go through the relevant BSC Change processes but will be submitted directly to the Authority for approval.
C5.5	Any amendments that are required to this document as a result of an approved BSC Change will be presented to the BSC Panel, who will decide either to submit the proposed changes directly to the Authority for decision or to initiate a review of the document as per Requirement C5.4.

Requirement C6	
The BPA will no longer include costs associated with STOR option fees.	
C6.1	The Transmission Company will no longer include costs associated with STOR option fees in the calculation of the BPA for any Settlement Period on or after the P305 Implementation Date.
C6.2	The revised calculation of the BPA is detailed in Appendix 2.
C6.3	The Transmission Company will continue to send the calculated BPA to the SAA (BPO service provider) as current.

Area D: Value of Lost Load pricing for Demand Control actions

Requirement D1 has two variants: Requirement D1p represents the Proposer's proposed solution while Requirement D1a represents the Workgroup's preferred alternative solution. Only Requirements D1p.5 & D1p.6 and D1a.5 & D1a.6 are different; all other Requirements appear unchanged under both options.

We expect that Requirement D1 will only require effort from the AMD service provider and ELEXON to implement, and that the difference in impacts between the two options will be minimal. We therefore do not anticipate any respondent incurring different impacts, costs or lead times to implement either option, although there may be additional ongoing costs for Requirement D1a due to the introduction of an annual review process.

Requirement D1p (Proposed Modification)	
The VoLL parameter will be established and its value initially set to £3,000/MWh before rising to £6,000/MWh ahead of Winter 2018/19.	
D1p.1	The VoLL parameter will be established and defined in the BSC.
D1p.2	The VoLL value will be set at £3,000/MWh effective from the P305 Implementation Date.
D1p.3	The VoLL value will rise to £6,000/MWh effective from 1 November 2018 (November 2018 BSC Systems Release).

Requirement D1p (Proposed Modification)	
D1p.4	The SAA (AMD service provider) will establish the VoLL parameter within central systems. This will be inserted as an editable parameter in similar style to the PAR parameter.
D1p.5	Further changes to the value of VoLL may be directed from time to time by the Authority at its discretion, and will be deemed to supersede whatever value is currently effective in the BSC at that time.
D1p.6	A revised VoLL value directed by the Authority must be published on the BSC Website and announced to the industry via an ELEXON Circular not less than 12 months prior to its effective from date. This minimum lead time may be amended by the Proposer later on in P305's Assessment Procedure.
D1p.7	Any participant eligible to do so may raise a Modification to propose a change to the VoLL value, which will follow the normal proceedings for a BSC Modification as laid out under BSC Section F, including setting an appropriate lead time for implementing any changes following approval or proposing an Alternative Modification.
D1p.8	A VoLL value will apply to all Settlement Periods on all Settlement Days from its effective from date up to and including its effective to date, which will be the day prior to a revised VoLL value taking effect.

Requirement D1a (Alternative Modification)	
The VoLL parameter will be established and its value initially set to £3,000/MWh before rising to £6,000/MWh ahead of Winter 2018/19.	
D1a.1	The VoLL parameter will be established and defined in the BSC.
D1a.2	The VoLL value will be set at £3,000/MWh effective from the P305 Implementation Date.
D1a.3	The VoLL value will rise to £6,000/MWh effective from 1 November 2018 (November 2018 BSC Systems Release).
D1a.4	The SAA (AMD service provider) will establish the VoLL parameter within central systems. This will be inserted as an editable parameter in similar style to the PAR parameter.
D1a.5	The VoLL value will be reviewed by the BSC Panel from time to time but not longer than 12 months following the previous review, or upon request by the Authority. This process is to be developed, but will be based on the existing MIDS review process and will allow for rationale or evidence provided by the Authority to be fed in where applicable. The BSC Panel can delegate responsibility for carrying out the review. If carried out under delegated authority, any conclusions to this review and any accompanying recommendations will be put to the Panel for its final recommendation. The process for conducting this review will be approved by the Panel, but must include consultation with the industry. The Panel's recommendations arising from such a review will be submitted to the Authority for approval.
D1a.6	If the review recommends a change to the VoLL value and this is approved by the Authority, it is expected that the BSC Panel will raise a corresponding Modification Proposal and submit it directly to the Report Phase with an initial recommendation to approve.

Requirement D1a (Alternative Modification)	
D1a.7	Any participant eligible to do so may raise a Modification to propose a change to the VoLL value, which will follow the normal proceedings for a BSC Modification as laid out under BSC Section F, including setting an appropriate lead time for implementing any changes following approval or proposing an Alternative Modification.
D1a.8	A VoLL value will apply to all Settlement Periods on all Settlement Days from its effective from date up to and including its effective to date, which will be the day prior to a revised VoLL value taking effect.

Requirement D2	
Notification of the commencement and cessation of a Demand Control event will be published on the BMRS.	
D2.1	The Transmission Company will notify the BMRA (BPO service provider) of the start of any Demand Control event as soon as reasonably practical but no later than 15 minutes after the commencement of the event. A notification will contain: • the Demand Control Instruction Identification Number; • the Stage Number (which will be '1' in this first submission); • the Demand Control Type Flag; • the start date and time; • the end date and time (to be left null until the event ends under Requirement D2.3); • the Distribution System Operator (DSO) impacted; • a Demand Control estimate in MW based on the total level of Demand Control instructed; and • a SMAF flag. The manner and format by which this information will be submitted will be agreed between the Transmission Company and the BMRA.

Requirement D2	
D2.2	The Transmission Company will notify the BMRA (BPO service provider) any update to the notification issued under Requirement D2.1 where there is further information regarding the existing Demand Control Instruction (e.g. an update to the MW Demand Control estimate based on instructions of further tranches of Demand Control or tranches of partial demand restoration) as part of the Demand Control Instruction, as soon as reasonably practical but no later than 15 minutes after it becomes aware of this update or amendment. This notification will contain: • the same Demand Control Instruction Identification Number as under Requirement D2.1; • an incrementally updated Stage Number; • the Demand Control Type Flag; • the start date and time of the additional instructions; • the end date and time (to be left null); • the DSO impacted; • a Demand Control estimate in MW based on the total level of additional Demand Control instructed; and • a SMAF flag.
D2.3	The Transmission Company will notify the BMRA (BPO service provider) of the end of any Demand Control event as soon as reasonably practical but no later than 15 minutes after the cessation of the event. This notification will contain the Demand Control Instruction Identification Number used under Requirements D2.1 and D2.2 and the end date and time, with all other fields null.
D2.4	The BMRA (BPO service provider) will publish all notifications received on the BMRS within one minute of receipt from the Transmission Company.
D2.5	A Demand Control event under P305 will be any event consisting of a Demand Disconnection event, a Voltage Reduction event or a combination thereof. The Transmission Company will include automatic Low Frequency Demand Disconnection events in the notifications submitted under Requirements D2.1, D2.2, D2.3 and D2.4 but these events will be for notification only and will be excluded from all other Requirements under this Area D. The Transmission Company will submit these actions separately into the imbalance price calculations flagged as system balancing actions.
D2.6	Upon notification of the cessation of the event, the BMRA (BPO service provider) will determine the total duration, in minutes, of the event. This will be the duration between the start date and time notified under Requirement D2.1 and the end date and time notified under Requirement D2.3.
D2.7	Upon notification of the cessation of the event, the BMRA (BPO service provider) will notify the SVAA (BPO service provider), the SAA (BPO service provider) and the CDCA (BPO service provider) of all Settlement Periods impacted by a Demand Control event, so that these BSC Agents know that the process for correcting imbalance positions with respect to that event will be applied to the impacted Settlement Periods. For the avoidance of doubt, an impacted Settlement Period is any Settlement Period in which the Demand Control event commenced or ceased or lies between the Settlement Periods containing the commencement and cessation.

Requirement D2	
D2.8	A consequential amendment will be required to the Grid Code to update arrangements relating to System Warning notifications in relation to Demand Control arrangements.

Requirement D3	
An associated volume for each Demand Control action will be calculated for each impacted Settlement Period for use prior to the SF Settlement Run.	
D3.1	For each stage of a Demand Control Instruction submitted under Requirement D2.1 or D2.2, the SAA (BPO service provider) shall create a Start Point Demand Control Volume where the MW level is set equal to the Demand Control estimate in Requirement D2, the time shall be set equal to the start time of the Demand Control stage as notified in Requirement D2.1 or D2.2 as applicable and the Demand Control Instruction Identification Number and Stage Number shall be set to the corresponding numbers notified in Requirement D2.1 or D2.2 as applicable.
D3.2	For each stage of a Demand Control Instruction, the SAA (BPO service provider) shall create an End Point Demand Control Volume where the MW level is set equal to the Demand Control estimate in Requirement D2, the time shall be set equal to the end time of the Demand Control Instruction as notified in Requirement D2.3 and the Demand Control Instruction Identification Number and Stage Number shall be set to the corresponding numbers notified in Requirement D2.1 or D2.2 as applicable.
D3.3	In respect of each Settlement Period the Demand Control Volume for each stage in a Demand Control Instruction shall be established by linear interpolation from the Start and End Point Demand Control Volumes calculated by the SAA (BPO service provider) for that Stage of the Demand Control Instruction.
D3.4	For each impacted Settlement Period the SAA (BPO Service Provider) will calculate a total Demand Control Volume for each Demand Control Instruction by summing the Demand Control Instruction Stage volumes calculated in Requirement D3.3.

Requirement D4	
Distributors will determine which MPANs were impacted by a Demand Disconnection event.	
D4.1	Any Licenced Distribution System Operator (LDSO) impacted by a Demand Disconnection event will be required to notify any impacted Independent Distribution Network Operator (IDNO) operating within its areas as soon as reasonably practical upon it becoming known that the IDNO's area has been impacted by the event.
D4.2	Following cessation of a Demand Disconnection event, each impacted LDSO and IDNO will identify the Meter Point Administration Numbers (MPANs) in their area(s) that were impacted by the event.

Requirement D4	
D4.3	Each LDSO and IDNO will notify the relevant HHDA and HHDC (for Half Hourly (HH) MPANs) or NHHDA (for NHH MPANs) of each disconnected MPAN, its Profile Class and the start and end time (in Universal Time Co-ordinated) of that disconnection. This will be notified using a spreadsheet in a predetermined format and structure to be determined.
D4.4	Each LDSO and IDNO will submit all notifications under Requirement D4.3 to the SVAA (BPO service provider) at the same time as notifying the relevant Supplier Agent(s). This can be done either by submitting each individual spreadsheet or one aggregated spreadsheet to the SVAA.
D4.5	LDSOs and IDNOs will not include in their notifications any MPANs that are trading in a de-energised state or have been deregistered in the Supplier Metering Registration Service (SMRS).
D4.6	The LDSO or IDNO will submit all notifications no later than 5 Working Days (WD) following the cessation of the Demand Control event.

Requirement D5	
The CDCA will estimate Demand Disconnection volumes for CVA BM Units.	
D5.1	The Transmission Company will inform the CDCA (BPO service provider) of any Directly Connected BM Units subject to Demand Disconnection. The Transmission Company will submit the BM Unit ID and affected Settlement Periods.
D5.2	The relevant LDSO or IDNO will inform the CDCA (BPO service provider) of any Embedded BM Units subject to Demand Disconnection. The LDSO or IDNO will submit the BM Unit ID and affected Settlement Periods.
D5.3	For each impacted Directly Connected or Embedded BM Unit in each impacted Settlement Period, the CDCA (BPO service provider) will agree the HH Demand Disconnection volume with the Lead Party of the BM Unit in accordance with BSCP03 Section 3.1.
D5.4	The CDCA (BPO service provider) will report the final estimates to the SAA (BPO service provider) using a new CDCA-IXXX data flow. The timescales for submitting the CDCA-IXXX data flow will be aligned with the existing timescales for CDCA-I014 data flow submission, and will only be sent for Settlement Periods that have been impacted by the event.
D5.5	The new CDCA-IXXX data flow will be defined in the IDD.

Requirement D6	
HHDCs will estimate Demand Disconnection volumes for HH MPANs.	
D6.1	For each impacted HH MPAN in each impacted Settlement Period, the relevant HHDC will determine the HH Demand Disconnection volume as Max {0, E – A}, where: E is an estimate of the Meter advance in normal conditions and is calculated in accordance with BSCP502 Appendix 4.2; and A is the validated Half Hourly Meter Data.

Timescales for the 'bottom-up' approach

Requirements D4-D8 detail the 'bottom-up' approach to correcting participants' imbalance positions following a Demand Control event.

These Requirements and the accompanying timescales have been written with the intent of producing a 'bottom-up' estimate in time for the SF Settlement Run (around 15WD following the relevant Settlement Day).

Respondents to the Impact Assessment are invited to give their views on whether Requirements D4-D8 could be completed in time for the II Settlement Run (around 5WD following the relevant Settlement Day).

Requirement D6	
D6.2	The HHDC will send disconnection volumes to the HHDA using a new DWWWW data flow that will be based upon the existing D0036 'Validated Half Hourly Advances for Inclusion in Aggregated Supplier Matrix' data flow but will be specifically for Demand Disconnection volumes.
D6.3	The HHDA will adjust each estimate for line losses and aggregate to BM Unit and Consumption Component Class (CCC) level.
D6.4	The HHDA will report the final estimates to the SVAA (BPO service provider) using a new DXXXX data flow that will be based upon the existing D0040 'Aggregated Half Hour Data File' data flow but will be specifically for Demand Disconnection volumes. The timescales for submitting the DXXXX data flow will be aligned with the existing timescales for D0040 data flow submission, and will only be sent for Settlement Periods that have been impacted by the event.
D6.5	A consequential change to the DTC will be required to define the new DWWWW and DXXXX data flows.

Requirement D7 has three variants to represent the three options that the Workgroup is currently considering, and an illustrative example for each option and the accompanying data flows can be found in Appendix 3.

We expect that Requirement D7 will require effort from Party Agents, the AMD service provider and the BPO service provider to implement, and that the difference in impacts, costs and lead times between the options may be significant. We do not anticipate any other respondent incurring different impacts, costs or lead times to implement any particular option, unless Suppliers indicate a preference for receiving the new data flows.

Requirement D7x (Option 1)	
The SVAA will estimate Demand Disconnection volumes for NHH MPANs and adjust Suppliers' settled volumes.	
D7x.1	For each impacted NHH MPAN in each impacted Settlement Period, the relevant NHHDA will include that MPAN, the Estimated Annual Consumption (EAC), the start and end times of disconnection and a Settlement Class level indicator in a new DYYYY data flow to be issued alongside the existing D0041 'Supplier Purchase Matrix Data File' data flow for Settlement Days impacted by the event. Once available, the DYYYY data flow will also contain the Annualised Advance (AA) and the AA Effective From and To Dates, as notified to the NHHDA by the Non Half Hourly Data Collector (NHHDC) via the D0019 'Metering System EAC/AA Data' data flow. This new DYYYY data flow will only contain data for MPANs subject to Demand Disconnection. The usual aggregation and defaulting rules will apply to each MPAN.
D7x.2	The SVAA (BPO service provider) will determine the impacted Settlement Periods, and for each impacted Settlement Period, the SVAA will profile and line loss adjust the data from the NHHDAs submitted via the DYYYY data flow to create a disconnection volume estimate at MPAN level. This will be done in line with existing rules for profiling and the application of line losses. The SVAA will scale those estimates according to the number of impacted minutes in the Settlement Period.
D7x.3	The SVAA (BPO service provider) will aggregate the MPAN-level disconnection volumes calculated under Requirement D7x.2 by BM Unit and CCC.

Requirement D7x (Option 1)	
D7x.4	For MPANs that have an AA in the DYYYY data flow notified under Requirement D7x.1, the SVAA (BPO service provider) will calculate an adjusted AA which is the sum of the original AA and the MPAN disconnection volume calculated under Requirement D7x.2.
D7x.5	The SVAA (BPO service provider) will send the adjusted AA to the NHHDA via a new DZZZZ data flow which will be a truncated version of the D0019 data flow. The DZZZZ data flow will not contain information on EACs.
D7x.6	The NHHDA will produce a D0041 data flow as per current requirements. For MPANs where it has received a DZZZZ data flow under Requirement D7x.5, the NHHDA will use the adjusted AA sent by the SVAA (BPO service provider) instead of the AA sent by the NHHDC.
D7x.7	The NHHDA will send the D0041 data flow to the SVAA (BPO service provider) in accordance with current practice.
D7x.8	For Settlement Periods without a Demand Disconnection event, the SVAA (BPO service provider) will process the D0041 data flow in accordance with current practice and calculate Supplier volumes at BM Unit and CCC level.
D7x.9	For Settlement Periods with a Demand Disconnection event, the SVAA (BPO service provider) will subtract the BM Unit and CCC level aggregate disconnection volumes calculated under Requirement D7x.3 from the BM Unit and CCC level volumes reported in the D0041 data flows.
D7x.10	The SVAA (BPO service provider) will use the volumes calculated under Requirement D7x.9 for all subsequent settlement calculations, including Grid Supply Point (GSP) Group Correction.
D7x.11	All of the above steps under this Requirement D7x are to be completed in time for the SF Settlement Run and, with the exception of Requirements D7x.2 and D7x.3, repeated for all subsequent Settlement Runs.
D7x.12	A consequential change to the DTC will be required to define the new DYYYY and DZZZZ data flows.

Requirement D7y (Option 2)	
The SVAA will estimate Demand Disconnection volumes for NHH MPANs and adjust Suppliers' settled volumes.	
D7y.1	For each impacted NHH MPAN in each impacted Settlement Period, the relevant NHHDA will include that MPAN, the EAC or AA as applicable, the start and end times of disconnection and a Settlement Class level indicator in a new DYYYY data flow to be issued alongside the existing D0041 data flow for Settlement Days impacted by the event. This new DYYYY data flow will only contain data for MPANs subject to Demand Disconnection. The usual aggregation and defaulting rules will apply to each MPAN.
D7y.2	The SVAA (BPO service provider) will determine the impacted Settlement Periods, and for each impacted Settlement Period, the SVAA will profile and line loss adjust the data from the NHHDAs submitted via the DYYYY data flow to create a disconnection volume estimate at MPAN level. This will be done in line with existing rules for profiling and the application of line losses. The SVAA will scale those estimates according to the number of impacted minutes in the Settlement Period.

Requirement D7y (Option 2)	
D7y.3	The SVAA (BPO service provider) will aggregate the MPAN-level disconnection volumes calculated under Requirement D7y.2 by BM Unit and CCC.
D7y.4	For Settlement Periods without a Demand Disconnection event, the SVAA (BPO service provider) will process the D0041 data flow in accordance with current practice and calculate Supplier volumes at BM Unit and CCC level.
D7y.5	For Settlement Periods with a Demand Disconnection event, the SVAA (BPO service provider) will subtract the BM Unit and CCC level aggregate disconnection volumes calculated under Requirement D7y.3 from the BM Unit and CCC level volumes reported in the D0041 data flows.
D7y.6	The SVAA (BPO service provider) will use the volumes calculated under Requirement D7y.5 for all subsequent settlement calculations, including GSP Group Correction.
D7y.7	All of the above steps under this Requirement D7y are to be completed in time for the SF Settlement Run and, with the exception of Requirements D7y.2 and D7y.3, repeated for all subsequent Settlement Runs.
D7y.8	A consequential change to the DTC will be required to define the new DYYYY data flow.

Requirement D7z (Option 3)	
The SVAA will estimate Demand Disconnection volumes for NHH MPANs and adjust Suppliers' settled volumes.	
D7z.1	The SVAA (BPO service provider) will calculate the GSP Group NHH Demand Disconnection volume. It will aggregate the BM Unit HH Demand Disconnection volumes calculated in Requirement D6.3 to derive a GSP Group HH Demand Disconnection volume. It will subtract this volume from the Demand Disconnection Volume calculated by the SAA (BPO service provider) as the total volume of Demand Control Stages under Requirement D3 that were for Demand Disconnection, to give the GSP Group NHH Demand Disconnection volume.
D7z.2	For each MPAN notified under Requirement D4.4, the SVAA (BPO service provider) will calculate a Demand Disconnection estimate by profiling the GSP Group Profile Class Average EAC.
D7z.3	The SVAA (BPO service provider) will sum the volumes in Requirement D7z.2 by Supplier.
D7z.4	The SVAA (BPO service provider) will calculate a scaling factor as the ratio of the 'top-down' Demand Disconnection volume from Requirement D7z.1 and the total Supplier Demand Disconnection estimate from Requirement D7z.3. The SVAA will apply this scaling factor to the individual Supplier volumes from Requirement D7z.3 to get the Supplier GSP Group Demand Disconnection volume estimates, such that the sum of these estimates matches the 'top-down' volume estimate.

Requirement D7z (Option 3)	
D7z.5	The SVAA (BPO service provider) will calculate the proportion of Demand Disconnection already allocated to each Supplier through GSP Group Correction by apportioning the 'top-down' Demand Disconnection volume between Suppliers based on their relative shares of correctable energy in the GSP Group for the Settlement Period. It will do this according to each Supplier's share of each CCC-level consumption multiplied by the GSP Group Correction Factor Scaling Weight.
D7z.6	For each Supplier the SVAA (BPO service provider) will subtract the volume from Requirement D7z.5 from the volume from the Supplier GSP Group Demand Disconnection volume estimates from Requirement D7z.4 to give the Supplier Demand Disconnection adjustment volume.

Requirement D8	
A volume for each Demand Disconnection event will be calculated for each impacted Settlement Period for use in adjusting Parties' imbalance positions.	
D8.1	The SVAA (BPO service provider) will sum the HH Demand Disconnection volumes across HH CCCs from Requirement D6.4 and the NHH demand disconnection volumes across NHH CCCs from Requirement D7x.3, D7y.3 or D7z.6 as appropriate for each BM Unit.
D8.2	The Transmission Company will identify any MPANs where a STOR or DSBR instruction had been dispatched and the volumes instructed from those MPANs in that Settlement Period and will notify these to the SVAA (BPO service provider) no later than 5WD following the cessation of the Demand Control event. As part of this impact assessment, the Transmission Company should identify whether this will be possible for each type of instruction.
D8.3	EMRS will identify any MPANs that fall under the Capacity Market and the volumes from those MPANs in that Settlement Period and will notify these to the SVAA (BPO service provider) along with the BM Unit that the MPAN is registered to, no later than 5WD following the cessation of the Demand Control event. As part of this impact assessment, EMRS should identify whether this will be possible.
D8.4	EMRS will identify any BM Units that fall under the Capacity Market and the volumes from those BM Units in that Settlement Period and will notify these to the SAA (BPO service provider) no later than 5WD following the cessation of the Demand Control event. As part of this impact assessment, EMRS should identify whether this will be possible.
D8.5	For MPANs which have been identified as being subject to Demand Disconnection under Requirement D4, the SVAA (BPO service provider) will sum the impacts identified under Requirements D8.2 and D8.3 for each BM Unit.
D8.6	The SVAA (BPO service provider) will deduct the volume calculated for each BM Unit under Requirement D8.5 from the volume calculated under Requirement D8.1. The SVAA will send the resulting involuntary demand control values for each impacted BM Unit to the SAA (BPO service provider) via an amended version of the SAA-I007 file.
D8.7	The SAA (BPO service provider) will sum the Demand Disconnection volumes calculated in D5.5 and D8.4 for each BM Unit.

Requirement D8	
D8.8	For each BM Unit the SAA (BPO service provider) will subtract voluntary demand control volumes calculated in D8.6 from the Demand Disconnection volumes calculated in D8.7. The SAA will include the resulting volumes in that BM Unit's Period BM Unit Balancing Services Volume (QBS).

Requirement D9 has two variants: Requirement D9p represents the Proposer's proposed solution while Requirement D9a represents the Workgroup's preferred alternative solution. Only Requirements D9p.2, D9p.3, D9p.4 & D9p.5 and D9a.2 are different; all other Requirements appear unchanged under both options.

We expect that Requirement D9 will only require effort from the AMD service provider and the BPO service provider to implement, although the difference in impacts, costs and lead times between the two options may not be the same. We do not anticipate any other respondent incurring different impacts, costs or lead times to implement either option.

Requirement D9p (Proposed Modification)	
Demand Control actions will be submitted into the Main Price calculation by the BMRA and SAA.	
D9p.1	For each Settlement Period in which a Demand Control event took place, all Demand Control actions will be added to the initial ranked set of system actions as a single Offer. This will result in one action per Settlement Period, with the volume of all actions instructed in that Settlement Period aggregated.
D9p.2	For the BMRS indicative price calculation and the II Settlement Run, the volume of these actions will be calculated as per Requirement D3.
D9p.3	For the SF and subsequent Settlement Runs for a Demand Control event that consists only of a Voltage Reduction event, the volume of this action will be calculated as per Requirement D3.
D9p.4	For the SF and subsequent Settlement Runs for a Demand Control event that consists only of a Demand Disconnection event, the volume of this action will be calculated as per Requirement D8.
D9p.5	For the SF and subsequent Settlement Runs for a Demand Control event that consists of both a Demand Disconnection event and a Voltage Reduction event, the Voltage Reduction event will be ignored and the volume of the Demand Disconnection event will be calculated as per Requirement D8.
D9p.6	The price of these actions will be the VoLL value applicable in that Settlement Period.
D9p.7	Where CADL Flagging is performed in accordance with BSC Section T Appendix 3, the SAA (BPO service provider) will determine the Continual Acceptance Duration (CAD) using the commencement and cessation times provided by the Transmission Company under Requirement D2, and will use this to determine whether the Demand Control action should be Continuous Acceptance Duration Limit (CADL) flagged. Where CADL Flagging is performed in accordance with BSC Section T Appendix 4, the Demand Control Action will remain unflagged in all cases.
D9p.8	A Demand Control action will be subject to the normal tagging and flagging rules.

Requirement D9p (Proposed Modification)	
D9p.9	Irrespective of whether a Demand Control action is flagged and tagged, the associated volume of that action will be estimated and used to correct supplier imbalance volumes in a consistent manner to that for unflagged volumes.

Requirement D9a (Alternative Modification)	
Demand Control actions will be submitted into the Main Price calculation by the BMRA and SAA.	
D9a.1	For each Settlement Period in which a Demand Control event took place, all Demand Control actions will be added to the initial ranked set of system actions as a single Offer. This will result in one action per Settlement Period, with the volume of all actions instructed in that Settlement Period aggregated.
D9a.2	The volume of these actions will be calculated as per Requirement D3.
D9a.3	The price of these actions will be the VoLL value applicable in that Settlement Period.
D9a.4	Where CADL Flagging is performed in accordance with BSC Section T Appendix 3, the SAA (BPO service provider) will determine the CAD using the commencement and cessation times provided by the Transmission Company under Requirement D2, and will use this to determine whether the Demand Control action should be CADL flagged. Where CADL Flagging is performed in accordance with BSC Section T Appendix 4, the Demand Control Action will remain unflagged in all cases.
D9a.5	A Demand Control action will be subject to the normal tagging and flagging rules.
D9a.6	Irrespective of whether a Demand Control action is flagged and tagged, the associated volume of that action will be estimated and used to correct supplier imbalance volumes in a consistent manner to that for unflagged volumes.

5 Impacts

This section summarises the impacts that P305 is expected to have on participants, documents and systems.

Impact on BSC Parties and Party Agents	
Party/Party Agent	Impact
BSC Trading Parties	BSC Trading Parties will be indirectly impacted by the reforms, as all elements of Ofgem's reform package will impact the more marginal imbalance prices this change would introduce.
Distributors	Distributors, HHDAs, NHHDAs and HHDCs will be involved in the 'bottom-up' approach to calculating changes to participants' imbalance positions following a Demand Control event.
Data Aggregators	
HH Data Collectors	

Impact on Transmission Company
The Transmission Company will be required to implement a LoLP Calculation Methodology, which would be contained in a new Code Subsidiary Document. It would then need to calculate the LoLP for each Settlement Period at Gate Closure for that Settlement Period. The Transmission Company will also be required to publish indicative LoLP figures ahead of Gate Closure. The Transmission Company will notify the BMRA of the start and end of any Demand Control events, and provide any data required for calculating the volume impacted by the event.

Impact on BSCCo	
Area of ELEXON	Impact
Release Management	ELEXON will be required to implement this Modification.
EMRS	The EMRS will be required to provide information to the SAA as part of the process of correcting participants' imbalance positions following a Demand Control event.

Impact on BSC Systems and processes	
BSC System/Process	Impact
BMRA	Changes will be required to reflect the changes to the imbalance price calculations. The BMRA will also be required to publish LoLP values and Demand Control event notifications on the BMRS.
SAA	Changes will be required to reflect the changes to the imbalance price calculations. The SAA will also be impacted by the 'bottom-up' approach to calculating changes to participants' imbalance positions following a Demand Control event.

Impact on BSC Systems and processes	
BSC System/Process	Impact
SVAA	The SVAA and CDCA will be impacted by the 'bottom-up' approach to calculating changes to participants' imbalance positions following a Demand Control event.
CDCA	

Impact on Code	
Code Section	Impact
Section Q	Changes would be required to implement this Modification.
Section T	
Section X Annex X-1	

Impact on Code Subsidiary Documents	
CSD	Impact
BMRA Service Description	Changes may be required to reflect changes to processes.
SAA Service Description	
SVAA Service Description	
CDCA Service Description	
BMRA User Requirement Specification	
SAA User Requirement Specification	
SVAA User Requirement Specification	
CDCA User Requirement Specification	
NETA Interface Definition and Design	Changes will be required to reflect the new CDCA-IXXX data flow and any consequential updates to other data flows.

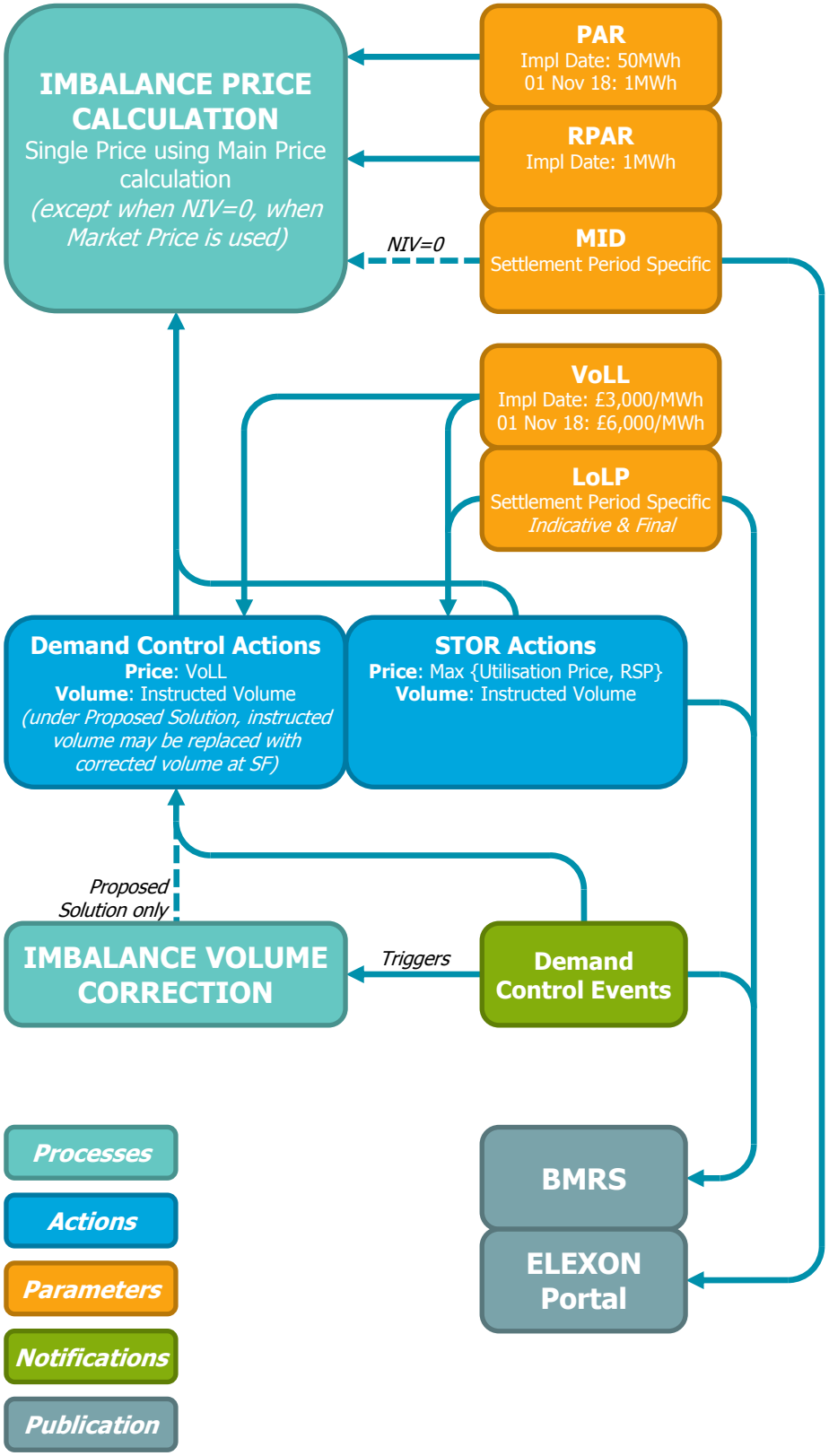
Impact on other Configurable Items	
Configurable Item	Impact
Market Index Definition Statement	Updates to this document may be required to reflect the revised use of Market Index Data under the BSC.
LoLP Calculation Statement	The LoLP Calculation Statement will be established as a new item on the BSC Baseline Statement.

Impact on Core Industry Documents and other documents	
Document	Impact
Grid Code	Changes will be required to the arrangements for the system warnings in relation to Demand Control instructions and notifications.
Data Transfer Catalogue	Changes will be required to reflect the new DTC data flows that P305 will introduce.
BSAD Methodology	Changes may be required to these documents as a result of this Modification.
SMAF Methodology	

Other Impacts	
Item impacted	Impact
Imbalance Pricing Guidance Note	Changes would be required as a result of this Modification.
Electricity Trading Arrangements Beginners Guide	

Appendix 1: P305 Solution Summary Diagram

This diagram summarises the impacts and interactions of P305 on the imbalance price calculations. Any part of the existing process not included on this diagram will not be impacted by P305.



Appendix 2: Revised Equation for the BPA

The revised equation for the calculation of the BPA will be:

$$BPA_j = (\sum FC_j / cF_j) + \sum(BC / cB)$$

Where:

FC_j = cost of purchases of Forward Contract option fees (£);

cF_j = capability of Forward Contracts for the relevant Settlement Period (MWh);

BC = cost of BM StartUp instructions to minute t (£); and

cB = volume capability of BM StartUp instructions over the defined BPA period to minute t (MWh).

If the value of cF_j is zero in any given Settlement Period then the value of $(\sum FC_j / cF_j)$ will be set to zero for that Settlement Period.

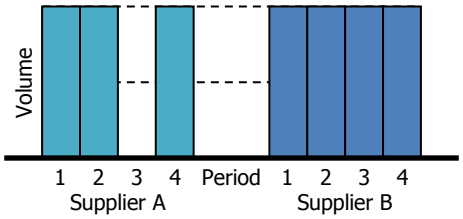
If the value of cB is zero in any given Settlement Period then the value of $\sum(BC / cB)$ will be set to zero for that Settlement Period.

Appendix 3: Correcting NHH Suppliers' Imbalance Positions

This Appendix summarises the Supplier imbalance position correction processes covered by Requirement D7. A data flow summary can be found at the end of this Appendix.

In the example used in this Appendix, there are two NHH Suppliers in a GSP Group across a time frame of four Settlement Periods. It is assumed each Supplier has a 'flat' profile of two units of consumption in each Settlement Period. Supplier A experiences a Demand Disconnection event in Period 3, while Supplier B is unaffected.

Reality following a Demand Control event



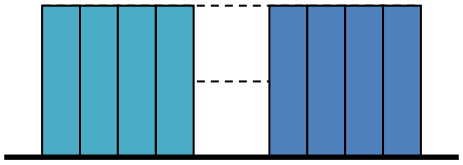
Supplier A is disconnected in Period 3, while Supplier B is unaffected.

The axis labels on this diagram apply equally to all following diagrams.

Settling Demand Control events without correction

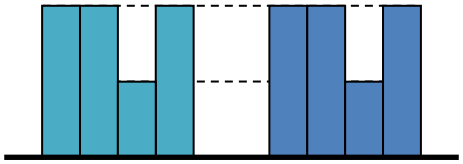
Demand Control event settled on an EAC

Step 1



Each Supplier's volumes are allocated through profiling, which does not account for the disconnected volume. Each Supplier is therefore assumed to have consumed the expected amount in all Periods.

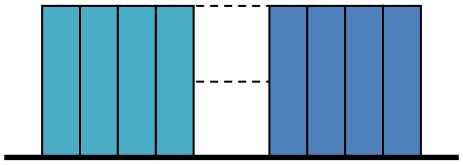
Step 2



GSP Group Correction Factor scales both Suppliers' volumes down in Period 3 to account for the total volume consumed in reality. This does not account for which Suppliers' volumes were actually reduced.

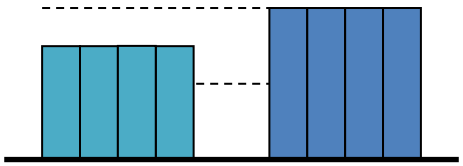
Demand Control event settled on an AA

Step 1



As above, each Supplier's volumes are allocated through profiling using the EAC.

Step 2



Supplier A's profiled volumes are scaled across the whole Meter advance period so that the total volume consumed in that period is correct. This does not account for when the disconnection actually occurred.

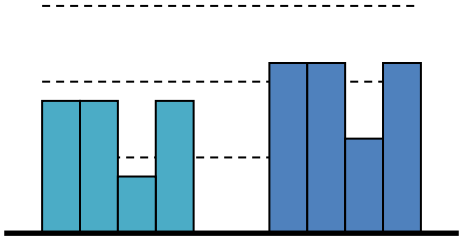
Assessment of the three options

The Workgroup is currently considering three options for correcting a NHH Supplier's imbalance position following a Demand Control event.

It is expected that Option 1 will be the most accurate, but also the most complex and expensive to implement and operate. Conversely, Option 3 is expected to be the least accurate but also the least complex and expensive to implement and operate.

In parallel with this Impact Assessment, the Workgroup is assessing the materiality of the accuracy of the three options. It will then consider the responses to the Impact Assessment, the results of its analysis and the expected frequency of this process being invoked to determine the most appropriate option to progress.

Step 3

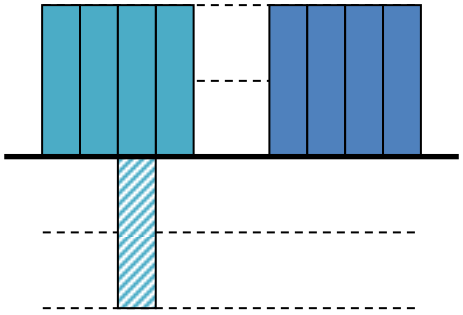


GSP Group Correction Factor scales both Suppliers' volumes for all Periods in the advance period to account for the total volume consumed in reality. This does not account for which Suppliers' volumes were actually reduced.

Settling Demand Control events under Option 1 (Req. D7x)

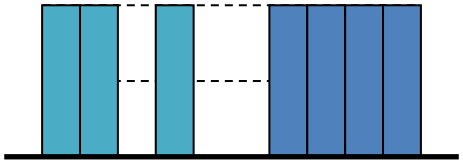
Correcting a Demand Control event settled on an EAC

Step 1



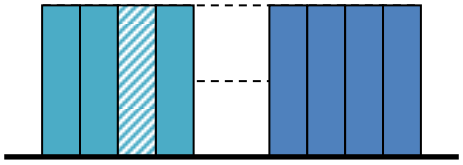
Supplier A's profiled consumption and the estimate of its Demand Disconnection volume are both taken.

Step 2



The net position is taken by subtracting the Demand Disconnection volume from the profiled volume. The resulting profile reflects reality so the application of GSP Group Correction Factors has no effect.

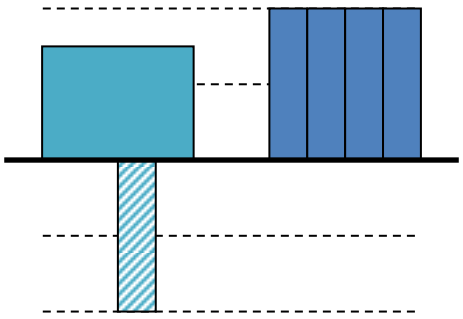
Step 3



To correct Supplier A's imbalance position, the estimated Demand Disconnection volume is added back in to Period 3. The resulting profile reflects what would have happened without the Demand Control event.

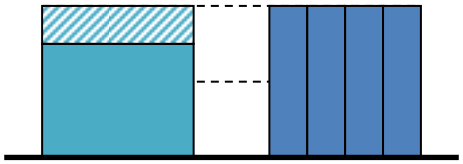
Correcting a Demand Control event settled on an AA

Step 1



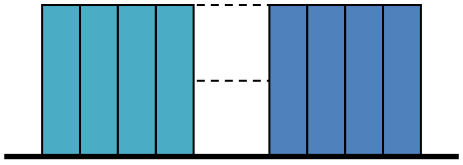
Supplier A's total AA volume taken from its Meter advance and the estimate of its Demand Disconnection volume are combined.

Step 2



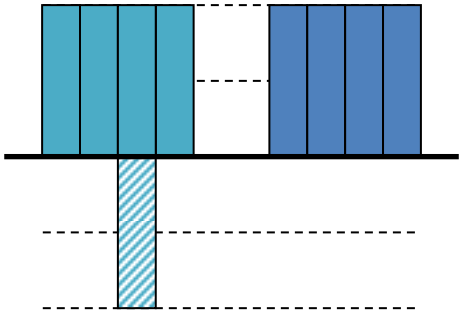
The gross volume across the advance period is taken by adding the Demand Disconnection volume to the AA volume to form the adjusted AA.

Step 3



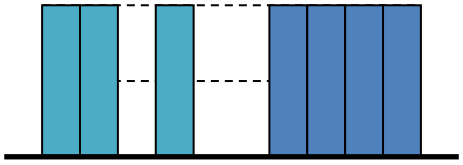
The adjusted AA is profiled.

Step 4



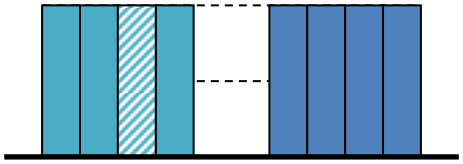
Supplier A's profiled consumption and the estimate of its Demand Disconnection volume are both taken.

Step 5



The net position is taken by subtracting the Demand Disconnection volume from the profiled volume. The resulting profile reflects reality so the application of GSP Group Correction Factors has no effect.

Step 6



To correct Supplier A's imbalance position, the estimated Demand Disconnection volume is added back in to Period 3. The resulting profile reflects what would have happened without the Demand Control event.

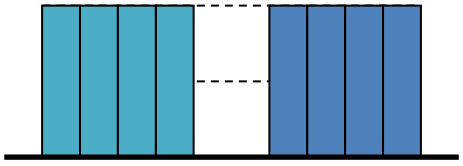
Settling Demand Control events under Option 2 (Req. D7y)

Correcting a Demand Control event settled on an EAC

This process under Option 2 will be the same as under Option 1.

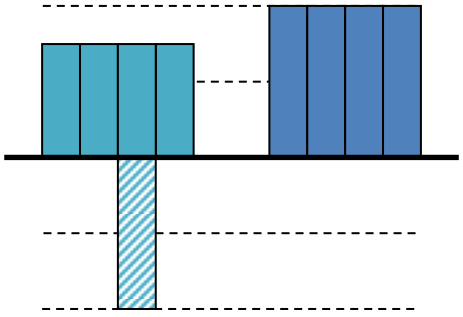
Correcting a Demand Control event settled on an AA

Step 1



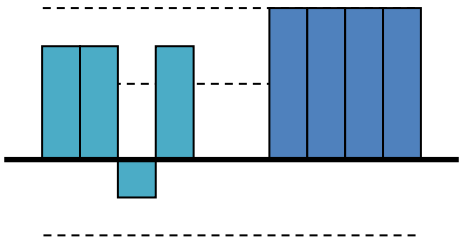
Each Supplier's volumes are profiled using the EAC, which does not account for the disconnected volume. Each Supplier is therefore assumed to have consumed the expected amount in all Periods.

Step 2



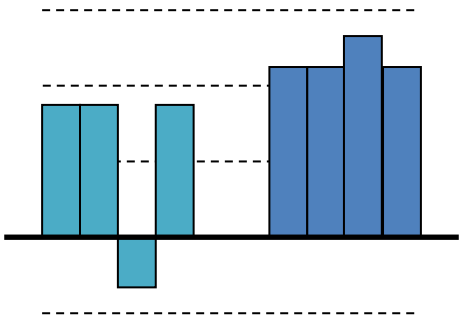
Supplier A's profiled consumption is scaled to reflect the net consumption across the advance period. The estimate of its Demand Disconnection volume is also taken.

Step 3



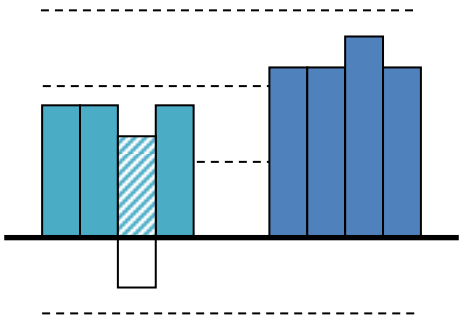
The net position is taken by subtracting the Demand Disconnection volume from the profiled volume.

Step 4



GSP Group Correction Factor scales both Suppliers' volumes for all Periods in the advance period to account for the total volume consumed in reality.

Step 5

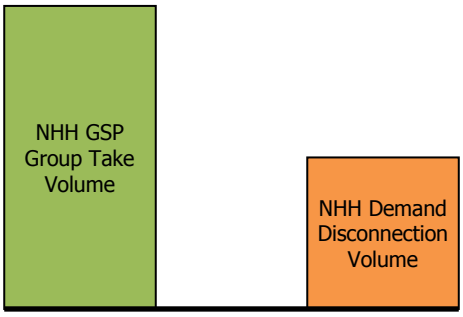


To correct Supplier A's imbalance position, the estimated Demand Disconnection volume is added back in to Period 3.

Settling Demand Control events under Option 3 (Req. D7z)

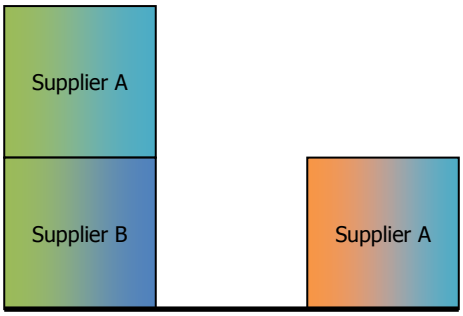
Option 3 is very different to Options 1 and 2, and does not involve Party Agents. The correction volume is calculated and applied by the SVAA following receipt of the D0041 data flow from the NHHDA. Unlike Options 1 and 2 which apply in place of the non-correction processes shown earlier in this Appendix, Option 3 is applied to the volumes produced after the end of the relevant non-correction process. The example below is shown for the EAC, but the process applies equally to correcting the AA.

Step 1



The total NHH GSP Group Take and the total NHH Demand Disconnection volume are taken.

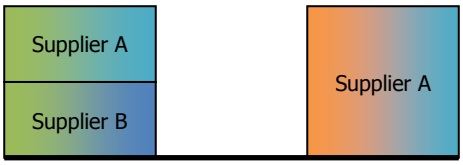
Step 2



The total NHH GSP Group Take is split proportionally between each Supplier.

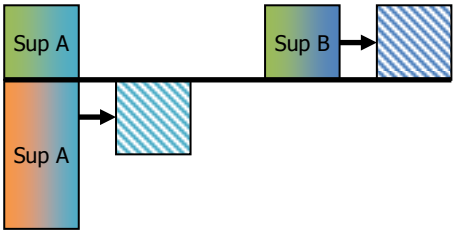
The estimate of the Demand Disconnection volume is split between each Supplier based on the number of MPANs impacted by the event and the Profile Classes those MPANs fall under.

Step 3



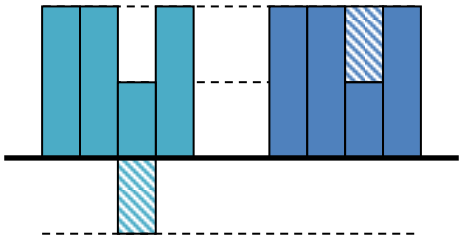
Each Supplier's proportion of the total NHH GSP Group Take is scaled so that the total volume equals that of the total NHH Demand Disconnection volume.

Step 4



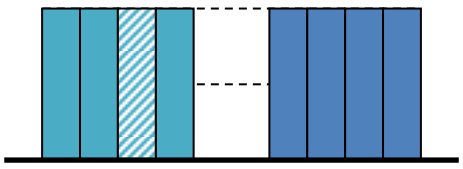
Each Supplier's NHH Demand Disconnection volume is subtracted from its scaled NHH GSP Group Take volume. The net volumes form the Demand Disconnection Correction volume for each Supplier in the impacted Settlement

Step 5



The estimated Demand Disconnection Correction volumes are netted from the volumes in Period 3 produced following the non-corrected Demand Control volumes settled on an EAC or an AA (shown here following on from Step 2 of the EAC settled profile with no correction).

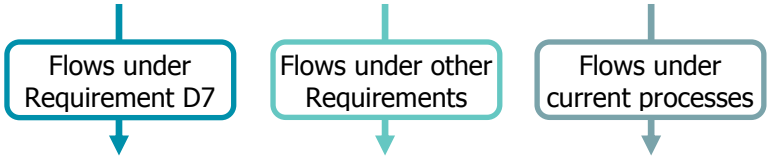
Step 6



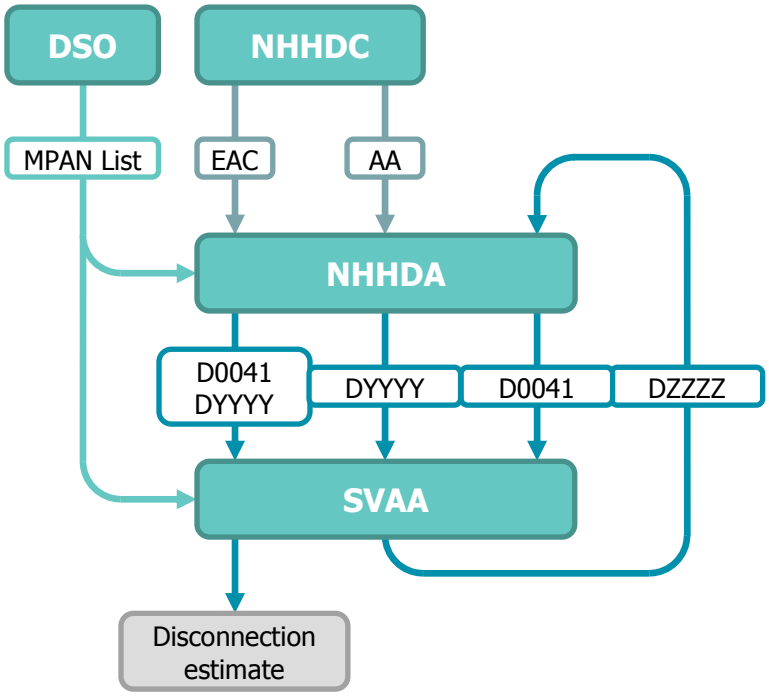
To correct Supplier A's imbalance position, the estimated NHH Demand Disconnection volume attributed to it under Step 2 is added back in to Period 3 (again shown here for the EAC process). The resulting profile reflects what would have happened without the Demand Control event.

Data flows under Requirement D7

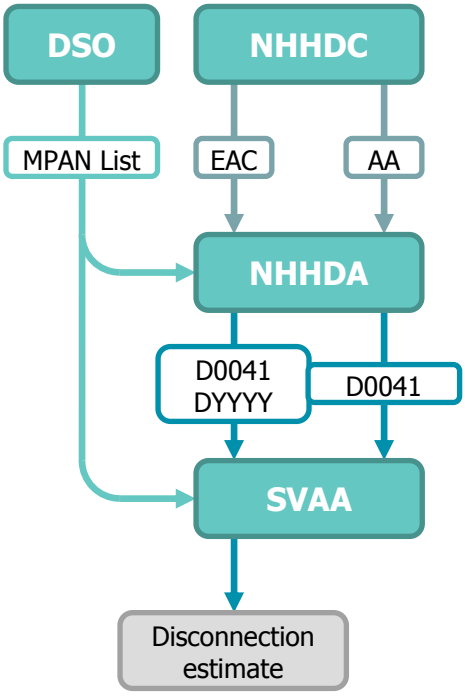
The following diagrams show the data flows submitted under each of the three options for Requirement D7, showing the new flows introduced by the relevant Requirement as well as any dependent new flows from other Requirements and any dependent existing flows that would feed into the process.



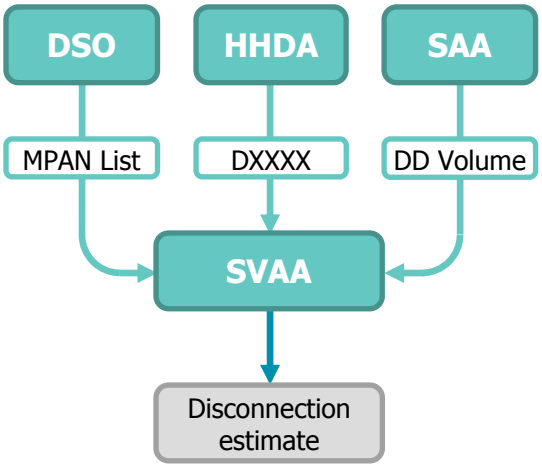
Data flows under Option 1



Data flows under Option 2



Data flows under Option 3



Appendix 4: Glossary & References

Acronyms

Acronyms used in this document are listed in the table below.

Glossary of Defined Terms	
Acronym	Definition
AA	Annualised Advance
AMD	Application Management and Development *(service provider)*
BM	Balancing Mechanism
BMRA	Balancing Mechanism Reporting Agent *(BSC Agent)*
BMRS	Balancing Mechanism Reporting Service
BOA	Bid Offer Acceptance
BPA	Buy Price Adjustment
BPO	Business Processing Outsourcing *(service provider)*
BSAD	Balancing Services Adjustment Data
CAD	Continual Acceptance Duration
CADL	Continual Acceptance Duration Limit *(parameter)*
CCC	Consumption Component Class
CDCA	Central Data Collection Agent *(BSC Agent)*
CM	Capacity Market
CP	Change Proposal
CSD	Code Subsidiary Document
DSO	Distribution System Operator *(combined term for LDSO and IDNO)*
DTC	Data Transfer Catalogue
EAC	Estimated Annual Consumption
EBSCR	Electricity Balancing Significant Code Review
EMRS	Electricity Market Reform Service
GSP	Grid Supply Point
HH	Half Hourly
HHDA	Half Hourly Data Aggregator *(Party Agent)*
HHDC	Half Hourly Data Collector *(Party Agent)*
IDD	Interface Definition and Design *(document)*
IDNO	Independent Distribution Network Operator *(BSC Party)*
II	Initial Information *(Settlement Run)*
LDSO	Licenced Distribution system Operator *(BSC Party)*
LoLP	Loss of Load Probability *(value)*
MID	Market Index Data

Glossary of Defined Terms	
Acronym	Definition
MIDS	Market Index Definition Statement
MPAN	Meter Point Administration Number
NHH	Non Half Hourly
NHHDA	Non Half Hourly Data Aggregator *(Party Agent)*
NHHDC	Non Half Hourly Data Collector *(Party Agent)*
NIV	Net Imbalance Volume *(value)*
PAR	Price Adjustment Reference *(parameter)*
RPAR	Replacement Price Adjustment Reference *(parameter)*
RSP	Reserve Scarcity Price *(value)*
SAA	Settlement Administration Agent *(BSC Agent)*
SBP	System Buy Price *(value)*
SCR	Significant Code Review
SF	Initial Settlement *(Settlement Run)*
SMAF	System Management Action Flagging
SMRS	Supplier Metering Registration Service
SO	System Operator
SSP	System Sell Price *(value)*
STOR	Short Term Operating Reserve
SVAA	Supplier Volume Allocation Agent *(BSC Agent)*
URS	User Requirement Specification *(document)*
VoLL	Value of Loss Load *(parameter)*
WD	Working Day

DTC data flows and data items

DTC data flows and data items referenced in this document are listed in the table below.

DTC Data Flows and Data Items	
Number	Name
D0019	Metering System EAC/AA Data
D0036	Validated Half Hourly Advances for Inclusion in Aggregated Supplier Matrix
D0040	Aggregated Half Hour Data File
D0041	Supplier Purchase Matrix Data File
DWWWW	*New Data Flow*
DXXXX	*New Data Flow*
DYYYY	*New Data Flow*
DZZZZ	*New Data Flow*

External links

A summary of all hyperlinks used in this document are listed in the table below.

All external documents and URL links listed are correct as of the date of this document.

External Links		
Page(s)	Description	URL
3	Imbalance Pricing page on the ELEXON website	http://www.elexon.co.uk/reference/credit-pricing/imbalance-pricing/
4	EBSCR page on the Ofgem website	https://www.ofgem.gov.uk/electricity/wholesale-market/market-efficiency-review-and-reform/electricity-balancing-significant-code-review
4	Project Discovery Final Report on the Ofgem website	https://www.ofgem.gov.uk/ofgem-publications/40354/projectdiscoveryfebcondocfinal.pdf
4	EBSCR Final Policy Decision page on the Ofgem website	https://www.ofgem.gov.uk/publications-and-updates/electricity-balancing-significant-code-review-final-policy-decision
5	Direction to National Grid page on the Ofgem website	https://www.ofgem.gov.uk/publications-and-updates/direction-national-grid-electricity-transmission-plc-relation-electricity-balancing-significant-code-review
5	P304 page on the ELEXON website	http://www.elexon.co.uk/mod-proposal/p304/
5	P305 page on the ELEXON website	http://www.elexon.co.uk/mod-proposal/p305/