Overview of Configurable Item changes to deliver the P344 solution

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OVERVIEW OF CONFIGURABLE ITEM CHANGES TO DELIVER THE P344 SOLUTION

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DEVELOPMENT OF NEW PROCESSES TO DELIVER P344

Project TERRE is a balancing product implementation project, developed by a group of European Transmission System Operators (TSOs) (including National Grid) to fulfil European Balancing Guidelines (EB GLs) legal requirements on TSOs. TSOs intending to use Replacement Reserve[1] (RR) are required to implement and make operational a European platform for the exchange of energy. The despatch of RR across several TSOs (including GB) will be harmonised by TERRE. The EBGLs' deadline for National Grid to utilise the TERRE platform is expected to be[2] December 2019. National Grid expects to start utilising RR Products for balancing during the TERRE product go-live window in autumn 2019[3].

TERRE will be used for Balancing similar to how current localised products such as Bid-Offers submissions are used. National Grid has directed that the TERRE product should feed into the Balancing and Settlement Code (BSC) calculations of imbalance prices and volumes as soon as it is used for GB balancing. This requires changes to the GB market arrangements, including the BSC. P344 was raised by National Grid on 1 June 2016 to implement TERRE at national Settlement level and ensure GB compliance with EB GLs. The Authority approved P344 on 24 August 2018.

New processes

It is necessary to amend/create numerous BSC processes to deliver the P344 solution, which will be captured in Code Subsidiary Documents (CSDs). The new processes can be grouped into three areas covering P344 Business Requirements 1-7[4]:

- Registration processes for Virtual Lead Parties and Secondary Balancing Mechanism Units - includes Qualification and BSC Charges;
- Metering System (MS) Identification (MSID) Pair Allocation; and
- HHDA Processes.

We engaged with industry and held separate meetings (Industry Workgroups (IWGs)) for each area as part of the development of the new processes. At each meeting we presented how we proposed to create new processes and how these would be reflected in CSDs (including the creation of a new BSC Procedure (BSCP)).

Implementation

TERRE system implementation will be in two stages.

Stage 1 – 28 February 2019:

- Amended BSC Sections and new or amended BSC Configurable Items which define the new processes for pre go-live TERRE activities will become effective;
- Changes to the Central Registration Agent (CRA) and Energy Contract Volume Allocation Agent (ECVAA) software to allow VLPs to accede to the BSC and allow BSC Parties and VLPs to register SBMUs; and

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[1] Replacement Reserve (RR) products are Pan-European balancing energy products with a >15 minute lead time.
[2] This deadline is subject to intermediary approval proceedings as outlined further in the P344 'Project TERRE' Final Modification Report
[3] TERRE product implementation in GB is continuing with the assumption of no impact from Brexit negotiations until directed otherwise.
[4] See P344 Final Modification Report attachment C for more detail

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- Changes to the Supplier Volume Allocation Agent (SVAA) software to allow the creation and maintenance of a register to record the MSID Pair allocations to Additional and Secondary BM Units for the purposes providing Balancing Services.

Stage 2 – Q4 2019 (GB TERRE Go Live Date which will be determined by ELEXON and the ESO):

- Changes to the Supplier Volume Allocation Agent (SVAA), Settlement Administration Agent (SAA), Balancing Mechanism Report Agent (BMRA), Funds Administration Agent (FAA) and BSC Portal software to give full effect to the TERRE arrangements.

- Changes to the Interface Definition and Design (IDD) spreadsheets and other BSC Configurable Items relating to the Stage 2 software changes will be issued separately for review in 2019.

- A parallel running test phase expected to commence in August 2019 that is intended to be a full end-to-end test of all systems and processes. Followed by go-live implementation between October and December 2019.

BSC legal text will be implemented on 28 February 2019 as part of the February 2019 BSC Release to allow GB market participants to complete the pre go-live tasks such as registration in order to participate in TERRE from phase one (including testing). However, whilst all the legal text will be implemented, only the legal text applicable in phase one will be active; the remaining BSC obligations will become active with TERRE go-live in phase two.

P344 BSCPs will be implemented in phase one as part of the February 2019 BSC Release. All other CSDs will be activated as part of phase two.

Who will be impacted by these changes?

BSCP changes required to deliver the P344 solution are expected to impact:

- BSC Parties;
- Central Registration Agent (CRA);
- ELEXON;
- Funds Administration Agent (FAA);
- Half Hourly Data Aggregators (HHDAs);
- Settlement Administration Agent (SAA);
- Supplier Volume Allocation Agent (SVAA); and
- Virtual Lead Parties.

Creation of a new Party and BM Unit type

In order to deliver the P344 solution it has been necessary to create a new type of Party and a new type of Balancing Mechanism (BM) Unit. The processes created/amended in BSCPs will refer to these throughout.

Virtual Lead Parties

P344 requires the BSC to facilitate demand response participation in TERRE, including independent aggregation facilities and energy storage. Ofgem defines independent aggregators as parties who bundle changes in consumer's loads or distributed generation output for sale in organised markets and who do not simultaneously supply the

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customer with energy. The P344 solution interprets this as requiring changes to the BSC to facilitate independent aggregators' participation in TERRE outside existing arrangements. P344 will allow such participants to be recognised as a distinct new category of BSC Party – Virtual Lead Parties (VLPs).

VLPs will not be subject to the same level of charges and obligations as existing BSC Parties. This is because they will only participate in Settlement by offering balancing energy in TERRE and/or the Balancing Market. If they wish to participate in other aspects of the BSC (e.g. trading in wholesale markets) they will have to Qualify under an existing capacity and would therefore be liable for all BSC obligations and charges.

Secondary BM Units

The P344 solution will be closely integrated with existing BSC processes for BM Settlement to allow participation in both markets (if required). GB Balancing Service Providers (BSPs) wishing to participate in TERRE will be required to register a BM Unit containing the assets (generation or demand side response) that will be used to deliver RR. Suppliers will be able to participate using their Additional BM Units[5]. Generators will be able to use Central Volume Allocation (CVA) BM Units, and VLPs will be able to use a new type of BM Unit[6] – a Secondary BM Unit (SBMU).

SBMUs will be allowed to participate in both TERRE and the Balancing Market simultaneously, but participation in either or both markets remains optional. Payments to or from GB BSPs for RR will be treated as Trading Charges under the BSC, with similar payment terms to existing Trading Charges.

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[5] Suppliers are allocated one BM Unit per GSP Group when they register. Any other BM Unit for a given GSP group, is an Additional BM Unit
[6] BM Units are used in the BSC to account for all energy that flows on or off the Total System, which is the Transmission System and the Distribution System combined.

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REGISTRATION OF VIRTUAL LEAD PARTIES AND SECONDARY BM UNITS

Virtual Lead Parties

P344 Business Requirement one lays out the need for a VLP registration process:

- 'Independent Aggregators/customers shall be able to register as a BSC Party under a new 'Virtual Lead Party' participation capacity'.

Accession

The VLP registration process will be based on the BSC Party registration process. VLPs will be required to:

- Complete and sign two original copies of the BSC Accession Agreement;
- Complete the Accession Form and send to Market Entry; and
- Send the Application Fee (a one off £500 charge[7]).

As with other BSC parties, VLPs will pay a flat monthly charge called a Base VLP Monthly Charge (see below). The VLP Monthly Charge applies from the agreed accession date and is not pro-rated.

Authorised Signatories

VLPs will need to create Authorised Signatories as per BSCP38 'Authorisations' in the same way as other BSC Parties

Communication lines

VLPs will be offered an optional low grade communication line to communicate with ELEXON as with BSC Parties, the cost of which is included in the BSC charges. However, as with BSC Parties, there will be additional costs for establishing high grade communication lines.

CVA Qualification

VLPs, like all other BSC Parties, will be asked to demonstrate their ability to communicate with BSC Central Systems and comply with the requirements in BSC Section O 'Communications under the Code' by completing CVA Qualification Testing as part of the market entry process. This is optional, as Parties may choose to either opt-out or waiver the testing, at their own risk. As such, BSCP70 'CVA Qualification Testing for Parties and Party Agents' will be amended to include references to the two VLP flows, CRA-I014 and SAA-I014.

Lodge Credit Cover

Trading Charge payments are made to or by Parties 29 days after a Settlement Day. Credit Cover ensures ELEXON has enough collateral from BSC Parties to cover these payments if they cannot be made. VLPs, like other Parties, will be required to lodge Credit Cover for Trading Charges; but, due to the nature of their role, they will be exposed to fewer Trading Charges, which means they will have to put up less Credit Cover.

As with other BSC Parties, lodging Credit Cover as part of the market entry process remains optional for VLPs.

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[7] This is payable upfront at the start of the process and covers the general administration costs of accession.

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The process for providing credit cover to the FAA will remain the same for VLPs:

- Lodge Cash Credit, which will be held in the reserve account;

- Provide Credit Cover by a letter of credit; or

- Approved Insurance Product

Credit Contacts

Before completing Market Entry, VLPs, like all new parties, will be required to provide ELEXON with two out-of-hours contacts in case an urgent issue arises e.g. Credit cover breaches etc.

The process for submitting an Operational Contact spreadsheet to Market Entry at least two working days (WD) prior to registering in Central Systems will be the same for VLPs.

Funds accession

The FAA manages the funds transfer between ELEXON and BSC Parties for any Trading Charges owed to or by BSC Parties during the Balancing and Settlement of the market.

As with all BSC Parties, the FAA will require some company financial details from VLPs to ensure they are ready to be able to invoice for any non-delivery charges payable from go-live. As such, there will be no change to the process of submitting form BSCP301/04(a) form for VLPs.

SVA Qualification

During the development of the P344 solution it was determined that an appropriate Performance Assurance Framework (PAF) should be implemented in order to provide assurance to the wider market that BSC provisions are followed similar to how assurance is provided now. For this reason, VLPs will undergo SVA Qualification.

BSC Parties or Party Agents undergo a Qualification process to demonstrate the necessary systems and processes in place to fulfil its obligations and to mitigate the risks of failure. BSCP537 'Appendix 1 Self Assessment Document (SAD)' contains the requirements for both Qualification and re-Qualification. Applicants are required to complete the SAD in accordance with BSCP537 'Qualification process for SVA Parties, SVA Party Agents and CVA MOAs'.

The Qualification process will be updated to apply to new VLPs and will include:

- VLPs being exempt from re-Qualification[8];

- VLPs not be required to undergo witness testing, unless requested by ELEXON;

- VLPs not being registered in Market Domain Data (MDD[9]); and

- VLPs will not be required to provide an annual statement.

The SAD will include a new section (section 19) for VLPs to communicate how they will identify and mitigate risks to Settlement. The identified risk areas that will be included are:

- Submission of MSID Pairs;

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[8] The re-Qualification process only applies to Party Agents if they deem they are making a Material Change to their systems as per BSCP537.
[9] MDD is data which relates to SVA to be provided by the SVAA to all persons involved in Settlement in accordance with BSCP509 'Changes to Market Domain Data'.

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- MSID Pair submission exception handling (processing/resolution);

- Registration loss process (VLP & Supplier);

- Submissions of Delivered Volume Failure and delay resolution; and

- Delivered Volumes exception handling (processing / resolution).

Registration of Party Role

VLPS will need to submit BSCP65 'Registration of Parties and Exit Procedures' form BSCP65/01 'Party Registration Application / Change of Registration Details Form' at least three WD prior to the Party registration date. The BSCP65/01 form will be amended to include VLPs.

VLP data flows

The P344 solution will require amendment to two existing data flows:

- SAA I014 - Settlement Report; and

- CRA I020 - Operations Registration Report.

These will be developed as part of wider P344 work and as such are not within the scope of this consultation but will be made available for industry consultation separately.

Secondary BM Units

P344 Business Requirement two describes the need for a SBMU registration process:

- 'BSC Parties with the 'Virtual Lead Party' Party participation capacity shall be able to register 'Secondary BM Units''

The SBMU registration process will be based on the Additional BM Unit registration process but simplified. The main difference will be that SBMUs will not be required to submit Generation Capacity (GC) and Demand Capacity (DC) and MDD. Additionally, there will be no requirement for ELEXON to submit Credit related data to the CRA.

Changes required

The P344 solution will:

- Create a process in for registering SBMUs to mirror that for Additional BM Units;

- Create a process for de-registering SBMUs to mirror that for Additional BM Units;

- Create registration and de-registration forms in BSCP15 'BM Unit Registration' for the registration of SBMUs;

- Require the CRA to inform the SVAA once a SBMU is registered;

- Require the CRA to provide relevant information to ELEXON for allocating a SBMU specific Monthly Charge (see below);

- Require ELEXON to provide a Transmission Loss Multiplier (TLMij) for new SBMUs based on the Grid Supply Point (GSP) Group ID of the SBMU;

- Make the registration and de-registration timescales the same as Additional BM Units;

- Allow SBMUs' Final Physical Notification (FPN) flags[10] to be changed from 'Y' to 'N'; and

- Create a process for amending the 'P/C' status,11 similar to that for License Exempt Export BM Units.

Trading Units

SBMUs cannot be in a Trading Unit as the MS allocated to SBMUs are registered to another Supplier. It is the Supplier who has responsibility to manage the imbalance position in regards to metered volumes and not the VLP. Hence the Supplier has Energy Accounts and the VLP does not. This also means that a VLP cannot be subject to Energy Contract Volume Notifications (ECVNs) or Metered Volume Reallocation Notifications (MVRNs).

BSC Charges

P344 will introduce two new Main Specified Charges:

- Base VLP Monthly Charge; and

- SBMU Monthly Charge.

The two new charge types will increase the amount recovered by way of Specified Charges, therefore reducing the amount that can be recovered by way of Funding Shares[12].

Initial estimates suggest TERRE charges will recover £54,000 based on 20 market participants and the suggested charge rates. However, this is only an initial estimate and may increase depending on other market factors that are in the process of being developed e.g. Issue 70 and Issue 71.

The BASE VLP Monthly Charge is proposed to be £125/month. This is half the amount for BSC Parties and reflects VLPs reduced interaction with the BSC.

The P344 Modification Workgroup envisaged that SBMU charges would mirror those for Additional BM Units i.e. £100 per BM Unit. This would mean that if a VLP wishes to register one SBMU per GSP Group, they will be charged £1,400/month. A Supplier with only one BM Unit per GSP Groups (i.e. Supplier BM Unit and no Additional BM Units) will be charged £60/month.

It should be noted that VLPs, unlike Suppliers, will not be subject to Funding Shares. Suppliers' Funding Shares are linked to their market share, meaning some will be charged less than £840/month as a result of Funding Share amounts and some will be charged more. i.e. if VLPs have to pay £840/month for a SBMU in each GSP Group they will be paying less than some Suppliers in total and more than others.

ELEXON, on behalf of the BSC Panel, is undertaking a review of BSC Charges. This will include a recommendation to the Panel on what the SBMU fee will be and will consider the above. BSC Charges are set solely at the discretion of the BSC Panel ahead of each Settlement Year, but may be varied during the Settlement Year. The BSC Panel will set the BSC Charges for VLPs and SBMUs ahead of P344 being implemented.

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[10] There is no reason at this time why this may occur but, there is no reason for it not to occur in theory. Therefore, to avoid future CSDs changes, this process will be added in case it is required at a later date.

[11] Production or Consumption BM Unit i.e. the BM Unit will be associated with the relevant Production or Consumption Energy Account where a Party is a Trading Party.

[12] A collective term for Main Funding Shares, SVA (Consumption Funding Shares, SVA (Production) Funding Shares, General Funding Shares, Annual Funding Shares and (where applicable) Default Funding Shares. They each have the meaning given to them in BSC Section D1.2.1. They each reflect a Party's proportionate share of aggregate Credited Energy Volumes for a given month and therefore the proportion of certain BSC Charges for that month allocated to the Party in question.

In order to inform the BSC Charges review, we would welcome your views on the BSC Charge for SBMUs which we will then feed-in to the BSC Charges review.

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MSID PAIR ALLOCATION

Suppliers and VLPs (i.e. the Lead Party) shall be required to notify the SVAA which MSID Pairs should be treated as belonging to a SBMU for the purposes of providing TERRE or BM Balancing Services. This will allow Settlement to aggregate Metered Volumes accordingly and ascertain whether a Balancing Service has been delivered.

What is a MSID Pair?

An MSID Pair represents the SVA MS(s) at a single customer site that will provide Balancing Services. It must include an Import MSID and may include an Export MSID. This is because on sites with both an Import and Export MSID it is uncertain where the Balancing Service deviation will be realised.

The SVAA shall maintain a register, the 'SVA Metering System Balancing Services Register', in which MSIDs (via MSID Pair Allocations) belonging to each BM Unit that offers BM or RR Services are recorded.

Parties shall be able to add, amend or delete MSID Pair Allocations on the 'SVA Metering System Balancing Services Register' to rectify any erroneous allocations and ensure accurate data is use in Settlement. There will however, be controls in place to ensure that this functionality is not used to facilitate a competitive advantage. Such controls will include:

- Parties must give at least five Working Days' (WD) notice prior to adding a new MSID Pair Allocation i.e. the effective from Settlement Date (EFSD[13]) must be five WD in the future;

- Parties can only amend an MSID Pair Allocation for 35 WD after the EFSD. Parties can amend existing MSID Pair effective to Settlement Date (ETSD) at any time; and

- After 35 WD Parties can amend the MSID Pair EFTD to ensure future settlement is correct.

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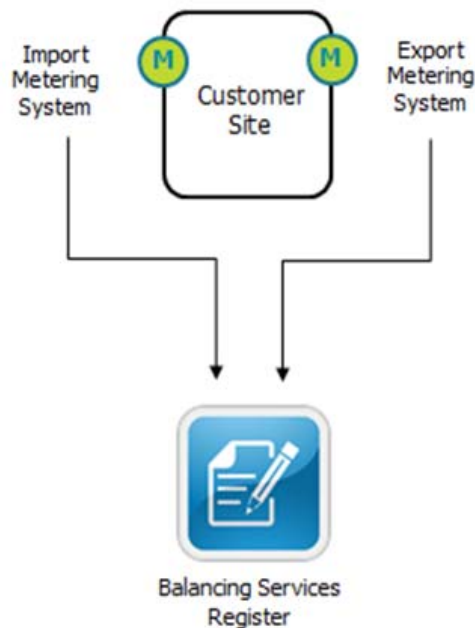
[13] The date from which the lead Party will become responsible for the MSID Pair

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As part of ELEXON's Foundation Programme of updating BSC Systems, development is under way to allow participants to use a self-service gateway for MSID Pair Allocation submissions. This will include manual online service functionality and the ability to do automatic bulk uploads. Change Proposal (CP) 1510 'Allow the online management of registrations, Market Entry and Market Exit' has more detail.

MSID Pair Validation

As an additional control ELEXON will validate any new or amended MSID Pair Allocation data it receives prior to recording that data on the 'SVA Metering System Balancing Services Register'. This will be a three stage validation process.

Stage one validation – Scheme validation

The SVAA will validate the MSID Pair Allocation data from Suppliers/VLPs to ensure:

- Physical integrity; and
- The data file contains all mandatory data items in the required formats

Stage two validation – Business logic validation

The SVAA will validate the MSID Pair Allocation in accordance with BSC Section S 'Supplier Volume Allocation' to ensure:

- It is from a valid Party i.e. a Supplier or VLP;
- The BM Unit to be allocated is a valid BM Unit;
- The Lead Party sending the notification is the Lead Party for the specified BM Unit;
- MSIDs may not be allocated to more than one MSID Pair at a time;
- Each MSID in the MSID Pair is located in the same GSP Group as the BM Unit to which they are to be allocated to; and
- The EFSD of the MSID Pair Allocation is at least five WD ahead of the date of receipt of the MSID Pair

Stage three validation – Reference data validation

The SVAA will validate MSID Pair Notifications to be allocated to SBMUs against reference data held by the relevant Supplier Meter Registration Service (SMRS) to ensure:

- MSIDs allocated to SBMUs are for a HH MS;
- MSIDs allocated to SBMUs are not disconnected; and
- The MSID GSP Group has been recorded correctly.

MSID Pair rejection and confirmation

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If MSID Pair Allocation passes validation a confirmation of acceptance of notification shall be sent. However, if MSID Pair Allocation is invalid (i.e. fails validation) a confirmation of rejection of notification will be sent.

This will allow Parties to record the MSID Pair Allocation confirmation and manager there portfolio effectively and, in the case of rejection, allow rectification action to be taken.

MSID Pair allocations notification process map
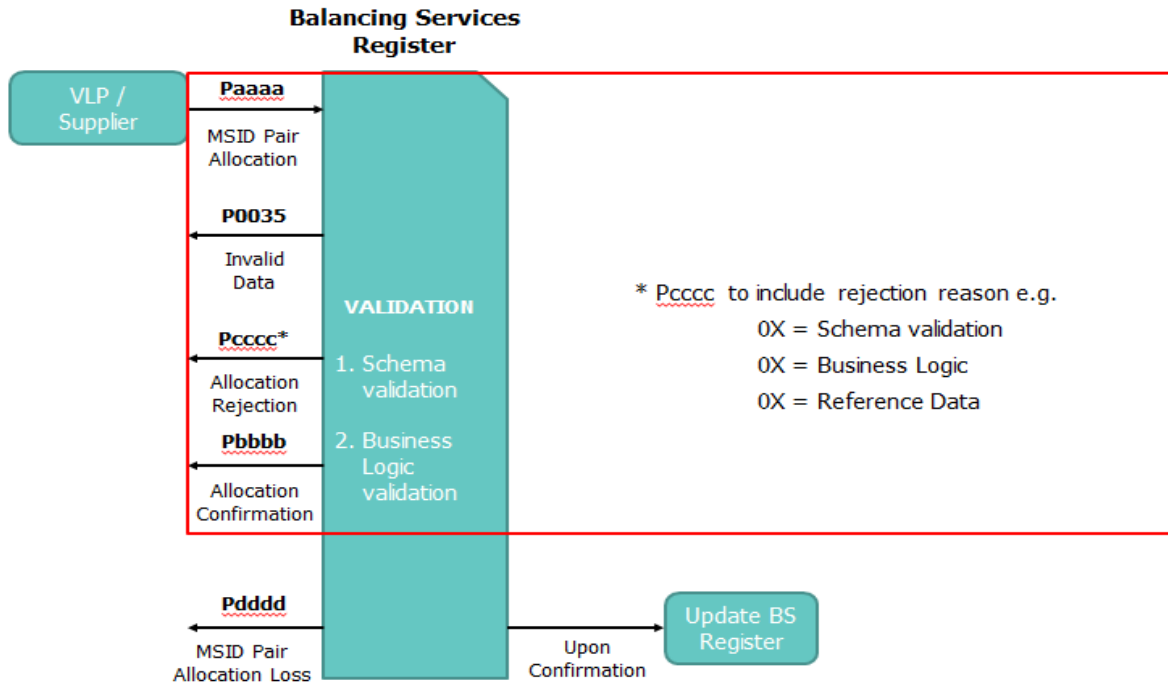
MSID Pair Loss Notification

Once an MSID Pair Allocation has been validated it will be actioned and recorded on the 'SVA Metering System Balancing Services Register'.

Settlement can't interrogate and validate commercial relationships, so will process all validated allocations therefore, if an MSID Pair is already allocated to a BM Unit, the most recent validated allocation will be actioned and the previous allocation end-dated. The previous registrant shall be notified of:

- MSIDs no longer allocated to their BM Unit;
- The MSIDs' GSP Group; and
- The date when MSIDs will no longer be allocated to their BM Unit for the provision of Balancing Services.

Disputed MSID Pair Allocation

We recognise that errors may occur and erroneous MSID Pair Allocations may be submitted which are subsequently validated and actioned. A Disputed MSID Pair Allocation Process has been developed. This process sets a framework

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(including timescales) for Parties to raise and resolve such disputes. The process shall be raised within one WD of a rejection of MSID Pair allocation notification, with a response to be sent within eight WDs. Further details are in the draft BSCP 602. The self-service gateway we are developing (see above) will include the functionality to raise a MSID Pair Allocation dispute.

Delivered Volumes

VLPs will be required to submit HH Delivered Volume data to the SVAA for MSID Pairs associated with SBMUs. The SVAA will use the Delivered Volume data and the Metered Volume data received from the HHDA to allocate the Delivered Volumes to individual MSIDs in SBMUs.

VLPs are obliged to ensure that MSID Pair Delivered Volumes are determined in good faith and in accordance with good industry practice to:

- Be accurate and complete; and

- Accurately reflect the change in the Imports and Exports resulting from the delivery of Balancing Services

To ensure that MSID Pair Delivered Volumes are determined in good faith and in accordance with Good Industry Practice a VLP must be able to:

- Provide sufficient information to demonstrate how the Delivered Volumes for any MSID Pair were derived;

- Re-run any individual determination of Delivered Volumes to recreate the results exactly as originally calculated; and

- Provide error logs generated as part of any Delivered Volume process.

Our Foundation Programme is developing means for participants to use Application Program Interfaces (APIs) for MSID Pair Delivered Volume submissions; further details will be provided at a later date.

Delivered Volumes validation

The SVAA will validate the MSID Pair Delivered Volume data it receives prior to allocating them to the constitute MSIDs. This will be a two stage validation process.

Stage one validation – Scheme validation

The SVAA will validate the MSID Pair Delivered Volume to ensure:

- Physical integrity; and

- The data file contains all mandatory data items in the required formats.

Stage two validation – Business logic validation

The SVAA will validate the MSID Pair Delivered Volume in accordance with BSC Section S to ensure:

- It is from a valid Party i.e. a Supplier or VLP;

- The BM Unit to be allocated is a valid BM Unit;

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- The Lead Party sending the notification is the Lead Party for the specified BM Unit; and
- The MSID Pair Delivered Volume is for a valid MSID Pair.

Delivered Volumes rejection and confirmation

If an MSID Pair Delivered Volume passes validation, a confirmation of acceptance of notification will be sent. However, if MSID Pair Delivered Volume fails validation, a confirmation of rejection of notification will be sent.

This will allow Parties to record the MSID Pair Delivered Volume confirmation and manage their portfolio effectively and, in the case of rejection, allow rectification action to be taken.

Delivered Volume process map
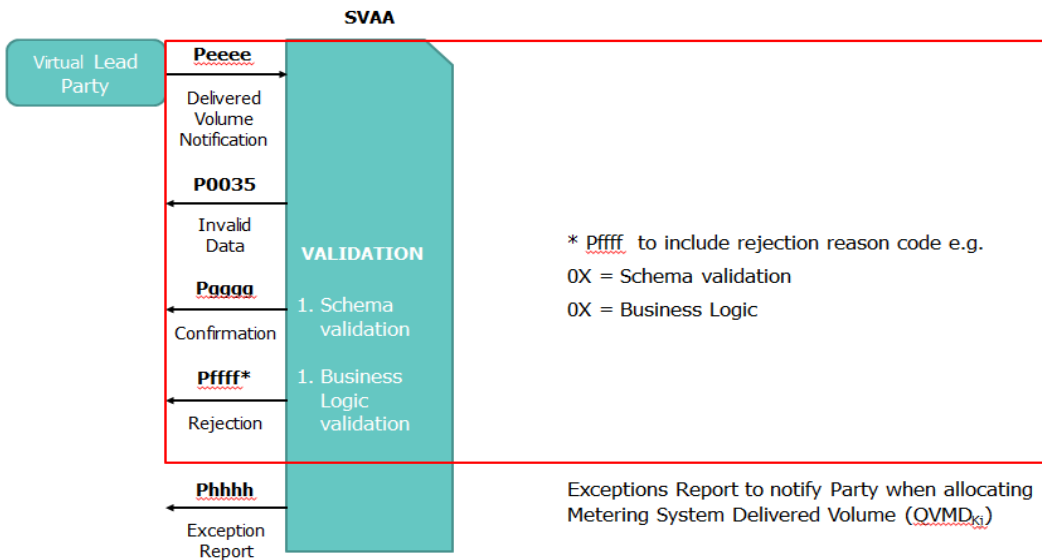
Delivered Volumes Exception Report

A new process is required to allocate MSID Pair Delivered Volumes between the MSID within the MSID Pair to create the MS Delivered Volume ($QVMD_{Kj}$). The MS Delivered Volume is used as the basis for adjustment applied at the Supplier BM Unit level to ensure the Supplier receives neither benefit nor penalty for the actions taken by a VLP.

If an MSID Pair Delivered Volume can't be fully allocated to the component MSIDs, the SVAA shall report an exception to ELEXON and the VLP. This will indicate that the MSID Delivered Volume is inconsistent with the Settlement metered data, suggesting that the MSID Delivered Volume has been reported incorrectly.

MSID Delivered Volume Algorithm
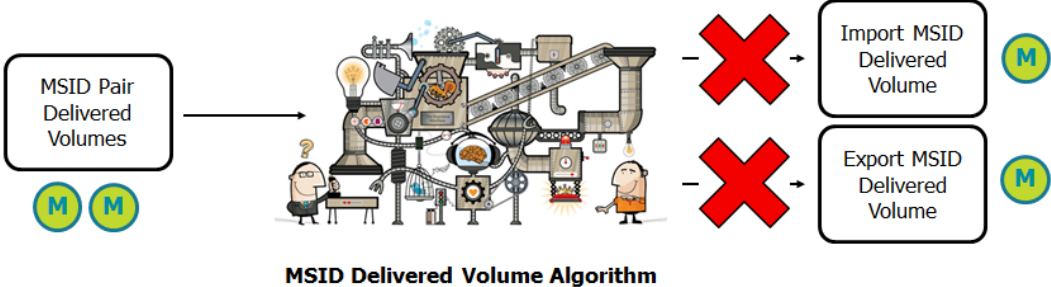
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HHDA PROCESSES

Processes need to be created so that HHDAs know which MSIDs they need to send MSID HH Metered Volumes to the SVAA for. Processes have been created to allow:

- HHDAs to pass information to the SVAA;

- The SVAA to process data received from HHDAs; and

- The SVAA to pass information to the SAA

Requesting MSID data

The SVAA will be expected to identify the relevant HHDA for each MSID specified in a MSID Pair using the new register being created (see above). The SVAA shall then send a request the relevant HHDA to provide MSID data for specific time ranges and Settlement Periods. The process for this will be:

- The SVAA sends a D0354 'Metering System Reporting Notification' to the relevant HHDA for the MSIDs they require data for; and

- The relevant HHDA will review the request and respond using:

  - D0355 'Metering System Reporting Confirmation' to accept the SVAA's request; or

  - D0356 'Metering System Reporting Rejection' to reject the SVAA's request (either a single MSID or the entire batch).

If the request is accepted, in addition to the D0355, the HHDA will send a DXXXX 'Metering System Half Hourly Metered Data'[14] to the SVAA for each Settlement Period and each MSID for the specified date range.

The new DXXXX data flow will contain the following information:

- MSID (MPAN Core);

- BM Unit ID;

- Consumption Component Class ID;

- Distributor ID;

- GSP Group;

- Line Loss Factor (LLF) Class ID;

- Supplier ID; and

- Period MS Metered Data (MSID HH Metered Volumes)

The processes described above are based on the processes and data flows used for Electricity Market Reform (EMR) Settlement (EMRS). These data flows contain information almost identical to that required for P344 and using them will reduce the amount of change required as well as using processes and data flows already familiar to industry.

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[14] DXXXX is a new dataflow being created for P344 and the actual data flow number will not be allocated until shortly before DTC implementation. DXXXX is used as a placeholder until such time. It is based on D0357 'Half Hourly Metered Data for EMR'. It is due to be implemented in February 2019. MRASCo's DTC CP 3541 has more detail

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How will SVAA use the Metering System HH Metered Volumes?

The Lead Party for a SBMU will be responsible for submitting to the SVAA the total delivered volume per Settlement Period per MSID Pair – the MSID Pair Delivered Volumes. The SVAA will be responsible for allocating MSID Pair Delivered Volume to one or both of the MSIDs in each MSID Pair using MS HH Metered Volumes received from HHDAs.

The SVAA will take the following steps:

- For each MSID Pair, allocate the MSID Pair Delivered Volume to the Export MSID for a positive value or to the Import MSID for a negative value[15];

- Allocate any remaining MSID Pair Delivered Volume to the other MSID in the MSID Pair i.e. the Import MSID for a positive value, or the Export MSID for a negative value;

- In the special case of an MSID Pair that does not include an Export MSID, all of the MSID Pair Delivered Volume will be allocated to the Import MSID;

- If MS HH Metered Volumes haven't been receive, check if HH Metered Volumes for the related Supplier have been received under the current SVAA processes. They will then:

  - o Follow the existing process for missing data; or

  - o Contact the HHDA to find out why data has not been sent;

- If a MSID Pair Delivered Volume cannot be allocated in full to the component MSIDs using this process, the SVAA System will report an exception to ELEXON and the VLP[16];

If the VLP review identifies that the exception was caused by the MSID Pair Delivered Volume being incorrect, the VLP will submit a corrected MSID Delivered Volume to the SVAA.

Following the above steps the SVAA will:

- Calculate the associated Secondary HH Delivered Volume (losses) and Secondary HH Delivered Volume (non-losses) based on the allocated MSID Pair Delivered Volume;

- Calculate the SBMU Supplier Delivered Volume by aggregating the LLF and GSP Group Correction Factor (GCF) adjusted Secondary HH Delivered Volumes for each SBMU 'i2' and Supplier Primary BM Unit 'i' for each Settlement Period;

- Send the SBMU Supplier Delivered Volume to the SAA;

- Calculate the associated Secondary HH Consumption Volume (losses) and Secondary HH Consumption Volume (non-losses) based on the Metered Volumes provided by HHDA;

- Provide the relevant VLP with both the Secondary HH Consumption (non-losses) volumes and the Secondary HH Consumption (losses) volumes for that MSID;

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[15] This is subject to the constraint that the magnitude of the MSID Pair Delivered Volume that can be allocated is capped by the magnitude of the half hourly metered data

[16] An exception indicates that the MSID Delivered Volume is inconsistent with the Settlement metered data, suggesting that the MSID Delivered Volume has been reported incorrectly

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- Where the Customer Consent Flag has been marked 'TRUE', provide the Supplier with both the Secondary HH Delivered (non-losses) volumes and the Secondary HH Delivered (losses) volumes for that MSID; and

- If MS HH Metered Volumes are not available, use data from the most recent Settlement Run for that Settlement Day, if available.

  - If no data is available from a previous Settlement Run then no data is entered for that Settlement Run for that SBMU.

Example of allocating MSID Pair Delivered Volume

If the MSID Pair Delivered Volume is -1.3 MWh, and the Import MSID has a HH metered consumption of 800 kWh, the volume allocated to the Import MSID will be -0.8 MWh.

The remaining -0.5 MWh of MSID Pair Delivered Volume will be allocated to the Export MSID (recognising that the MSID Pair Delivered Volume must have reduced the site Export).

Role of the SAA

Once the SAA has received information from the SVAA, they will use the SBMU Supplier Delivered Volume to adjust Suppliers' energy imbalance positions. They will also use the SBMU Demand Volume to ratify the VLP's delivery of Balancing Services volumes.

Customer consent

HHDAs must not inform Suppliers which MS are used as part of SBMUs unless the customer has consented for the information to be shared.. They may however, inform Suppliers how many MS are used for SBMU purposes. Further details about this can be found in the P344 Final Modification Report and the Authority's decision letter on the P344 Modification webpage.

HHDA Qualification

BSCP537 and it Appendixes will be updated to reflect the HHDAs will have in relation to VLPs and SBMUs[17].

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[17] New processes for HHDAs in relation to P344 are being introduced by IWG3.

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OVERVIEW OF CONFIGURABLE ITEM CHANGES TO DELIVER THE P344 SOLUTION

REDLINING

The redlining for the CSDs that require amending can be viewed in attachments A – V. In addition to the redlining required to deliver the P344 solution, we have also included housekeeping changes to several BSCPs:

- BSCP20 – changes to 4.2, 4.5 and 4.9 as these sections are no longer applicable

- BSCP31 – changes to reflect a change in definition in section 2.1

- BSCP68 – changes to section 4.8.1.2.1 to reflect a previous spelling error.

- We have also included housekeeping changes to BSCP507 and BSCP508.

- BSCP537 – changes to section 1.2 to add the Performance Assurance Party role missing from the acronym table and was not expanded in Section 1.2

- BSCP537 Appendix 3 – P344 does not make any change to BSCP537 Appendix 3 but we are taking the opportunity to implement a housekeeping change as BSCP537 Appendix 3 is related to changes proposed by P344

- The Communication Requirement Document – Section 4.6.1, to correct a manifest error, as the options previously shown no longer exist

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OVERVIEW OF CONFIGURABLE ITEM CHANGES TO DELIVER THE P344 SOLUTION

INDUSTRY WORKSHOPS

As part of the development of the P344 solution and the development of the required BSCPs we held three meetings with industry members. The purpose of these meetings was not to assist with developing the solution (as per Modification Workgroups), but, as the P344 solution (including Business Requirements) had already been approved; the purpose of the meetings was to inform participants of the proposed changes to impacted BSCPs and to gather any feedback in order to tweak the changes as required. The main points of discussion from each of the meetings are laid out below.

Registration of VLPS and SBMUs

Virtual Lead Party Registration Process

There were no points raised following the presentation by ELEXON.

ELEXON asked about the Market Exit process and it was agreed that the Market Exit process for VLPs should follow the same process as other Parties and last for 14 months until all liabilities have expired.

ELEXON asked about the duration of the VLP Market Entry process and the Workgroup offered no thoughts about the length of the entry process and were happy that it should align with the existing Market Entry timelines.

Secondary BM Unit registration process

Whether there should be a process for changing the FPN flag form 'Y' to 'N' was discussed. This has been discussed by the Issue 71 Workgroup the previous week (11 Jul 18) in the context of the role of the FPN. It was agreed that the Workgroup should deal with the 'here and now' rather than what may be in the future and that if Issue 71 leads to a Change being raised, then that Change can change arrangements as required.

It was agreed that while there should be no reason for a SBMU to be flagged as 'N', it should be allowed as circumstances may change at some point in the future (this was discussed later as part of Base Charges – see below).

The Workgroup were happy that the timescales for the registration of SBMUs should align with the time scales for Additional Supplier Primary BM Unit registration[18].

It was agreed that the BSCPs should be explicit about whether Primary BM Units or SBMUs are being referred to in relation to the registration process.

It was agreed that there should be a process to amend the 'P/C' flag from SBMUs and this should be similar to that used for License Exempt Export BM Units.

It was discussed that SBMUs will be 'held' in the CRA whereas Primary BM Units are 'held' in MDD. It was explained that the MDD is essentially a database of reference data which is then shared with various BSC Systems however, as there is no need for SBMUs to be captured in MDD, the distribution of required data can be done by the CRA.

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[18] Further details can be found in BSCP15.

OVERVIEW OF CONFIGURABLE ITEM CHANGES TO DELIVER THE P344 SOLUTION

BSC Specified Charges

ELEXON explained how BSC Charges and Costs are operated and explained that we are expecting roughly 20 VLPs however, this may increase substantially with Issues 70 and 71. It was explained that if there are 20 VLPs, each with a single SBMU, then the annual Charges would be £54,000 based on the figures proposed.

Base VLP Monthly Charge

It was suggested by ELEXON that the Base VLP Charge should be £125/month. This is half of the Base Monthly charge for BSC Parties. The figure is based on guidance from the P344 Modification Workgroup and that as VLPs will not have the full range of access that BSC Parties have, they should not pay as much. It ties in with the principal that P344 arrangements should encourage participation as much as possible and not be seen as a hindrance. The workgroup agreed with ELEXON's proposal and there was no further discussion.

SBMU Monthly Charge

ELEXON proposed that as the SBMU registration process is being aligned with the Additional BM Unit process as much as possible, the SBMU Monthly Charge should align with the Additional BM Unit Monthly charge too and be £100 a month per SBMU registered[19]. The Additional BM Unit amount is currently being reviewed and the Panel will consider amount in due course. It is expected that the Additional BM Unit review will also consider SBMUs and the two will remain aligned i.e. if the Additional BM Unit charge drops to £50, then the SBMU charge will drop to £50 too.

It was pointed out that a Supplier can register and be assigned 14 BM Units, one for each GSP Group and they would cost £100 a month. However, for a VLP to register a SBMU in each GSP Group would cost £1,400 a month. It was felt that this was unfair on VLPs.

The workgroup discussed the following options:

1. The SBMU Monthly charge being approximately £7.14 a month (£100 divided by 14)

2. The SBMU Monthly Charge aligning with the Primary BM Unit Monthly Charge rather than the Additional BM Unit Monthly Charge (see Section 3 for how costs are allocated)

The first option was discounted on the grounds that if a VLP registered several SBMUs in one GSP Group then they would have an unfair advantage over Suppliers. For example, if a VLP registers five SBMUs in one GSP Group, the cost would be £35.70 a month where as a Supplier would be charged £500 a month.

The second option was favoured by the Workgroup as it would give more parity between VLPs and Suppliers. This would mean that when a VLP completes the registration process they are assigned 14 SBMUs, one for each GSP Group. For every extra SBMU registered they would be charged £100. This would effectively create a new type of BM Unit which, as a working title, should be called an 'Additional Secondary BM Unit'. If the VLP chooses to only use the SBMUs registered in some GSP Groups then the other would be FPN flagged 'N' (see above) and the System Operator (SO) would not have visibility of them. The SO representative present did not see any initial concerns with this proposal.

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[19] N.B. This section is a record of the discussion on the day of the IWG meeting. Following the IWG meeting the Panel amended the amount to £60/month (see above).

OVERVIEW OF CONFIGURABLE ITEM CHANGES TO DELIVER THE P344 SOLUTION

ELEXON raised the point that the BSC would possibly need to be changed to accommodate this suggestion as well as the CRA reporting processes and would have an impact on the ELEXON Foundation Programme and could, potentially, impact the P344 implementation plan. ELEXON will look into this a part of the review of BSC Charges.

MSID Pair Allocation

MSID Pair Allocation

SVA Metering System Balancing Services Register

ELEXON asked the working group how often Parties envisage updating the register. It was agreed that updates to the register on a daily basis will be unlikely. Updates are expected to occur on a monthly or quarterly basis to align with customer contracts. However, the working group noted this could increase to daily updates in the future depending on market development.

ELEXON asked how many MSIDs the register should be able to accommodate and questioned whether the option to update in bulk versus one MSID at time would be beneficial. Members noted difficulty in predicting how many updates will be required until it is known how many VLPs will register. Bulk (in addition to single) uploads will be needed when updates become more frequent.

Discussions followed on the desired communication method for updating the register and the impacts this will have on Party's systems. ELEXON highlighted that the P344 Workgroup previously ruled out the Data Transfer Network (DTN) due to costs. ELEXON noted the Participation Management Platform (Salesforce), being implemented as part of ELEXON's foundation programme, could be used instead. ELEXON asked how the data would be formatted by industry, which was confirmed to be manual.

The working group asked whether data entered via the participant management platform (Salesforce) would be reusable and highlighted that it is important that Parties do not have to repeat processes unnecessarily. For example, if MSIDs are already entered, it should be possible to access to them via the front end and amend the allocation without having to re-type the entire MSID. ELEXON noted this and will consider it as part of the platform solution and is currently working towards this principle.

MSID Pair Validation

ELEXON asked whether a rejection reason code should be included in an Allocation Rejection for any MSID Pair Notifications that fail validation. It was agreed that this would be useful for Parties and it will prevent calls to the BSC Helpdesk.

Retrospective MSID Pair Allocation

ELEXON advised that the P344 Workgroup recommended that retrospective MSID Pair allocations should be limited to Settlement Days prior to the R1 Settlement Run. ELEXON asked whether there should be any further criteria limitations. The workgroup discussed the merits of limiting retrospective amendments to existing and / or rejected allocations. The working group concluded that adding this limitation would incentivise the submission of accurate data and mitigate the risk that VLP actions significantly impact later Settlement Runs.

Erroneous MSID Pair Allocation

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OVERVIEW OF CONFIGURABLE ITEM CHANGES TO DELIVER THE P344 SOLUTION

ELEXON advised upon receiving an allocation notification it will undergo validation and, if the MSID Pair is already registered to another SBMU, the notification will be actioned and the losing Party will be informed through a MSID Pair Allocation Loss notification. ELEXON informed that it does not propose codifying an erroneous MSID Pair allocation process. The working group asked whether there is anything in place to stop the losing VLP/Supplier from reregistering and overwriting the allocation. ELEXON advised that there is nothing to stop this occurring and it is the Lead Party's responsibility to investigate and resolve any anomalies.

The working group raised concerns relating to how VLPs/Suppliers will validate loss notifications within the proposed allocation timescales. The working group discussed what would be an appropriate timescale and requested that the initial MSID Pair Allocation Notification timescales be extended from D-1 to D-5. It was also agreed that a simplified erroneous process should be developed that is similar to the Master Registration Agreement (MRA) erroneous transfer process. This would include the necessary mediation steps between the two Parties with a timeline of when the actions need to be taken. It was noted that these obligations will need to be considered as part of the PAF.

The working group questioned how MSID Pair Loss notifications will be communicated. It was suggested that the same communications method used for the notification of allocations be used and it was noted that the erroneous process should cater for different communication methods.

HHDA Processes

MSIDs allocated to SBMUs will already be registered in Supplier BM Units. BSC Systems will need MSID delivered volumes for each Settlement Period for each MSID, to adjust Suppliers' incorrect imbalance positions caused by accepted TERRE or BM Bid/Offers against SBMUs. BSC Systems shall need MSID HH metered volumes from HHDAs to calculate MSID delivered volumes from MSID Pair delivered volumes and ascertain if accepted bid volumes have been delivered or not. This is why there are new processes for HHDAs to submit MSID HH delivered volumes for specified MSIDs.

The only reason that data flows from the SVAA may be rejected by HHDAs is if there are issues with dates or other potential faults not relating to the actual MSID data. MSIDs for SBMUs etc. will already have been verified on more than one occasion so shouldn't be cause for rejection alone.

In the event of a Change of Agent event occurring between Settlement Runs for a Settlement Date the process will be similar to that for MSIDs within Supplier BM Units i.e. the HHDA for a Settlement Day is responsible for all Settlement Periods for that Settlement Day. If the SVAA requests information from a HHDA and the HHDA has changed, the SVAA shall interrogate the Electricity Central Online Enquiry Service (ECOES) and proceed accordingly.

APIs will be developed in due course to enable ECOES checking to become automated but at the present there is no timeline for development.

The details of the data flows that will be used have been published on the MRA Service Company (MRASCo) website.

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OVERVIEW OF CONFIGURABLE ITEM CHANGES TO DELIVER THE P344 SOLUTION

APPENDIX 1: WORKGROUP DETAILS

Industry workshop Attendance				
Name	Organisation	Registration processes	MSID Pair Allocation	HHDA processes
Elliott Harper	ELEXON (Chair)		✓	✓
Chris Wood	ELEXON (Chair/Lead Analyst)	✓		✓
Sasha Townsend	ELEXON (Lead Analyst)		✓	
Adelle Wainwright	National Grid		☎	
Alastair Martin	Flexitricity	☎		
Bernie Dolan	National Grid	✓		
Christian Bach	Incommodities	☎		
Colin Prestwich	Smartest Energy		✓	☎
Eamonn Bell	Grid Beyond	✓	✓	
Graham Oakes	Upside Energy	☎		
Haydn Willis	SSE		✓	
Ian Hall	IMServ			✓
John Sherban	Quorom Development	✓		
Lee Stone	E.On	✓		
Meg Wong	Stark			☎
Nick Wood	Powervault	✓		
Nicola Ashdown	Siemens			✓
Nik Wills	Stark			☎
Oliver Zhe Xing	Orsted		✓	
Pam Liu	Intellicharge	✓	✓	✓
Paul Barnett	Manx Utilities	✓		
Paul Troughton	EnerNOC UK Ltd	✓		
Sam Botterill	Independent		✓	
Sebastian Blake	Open Energi	✓		
Tom Webb	UK Power Reserve	✓		
Colin Berry	ELEXON (Design Authority)			✓

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Industry workshop Attendance				
Name	Organisation	Registration processes	MSID Pair Allocation	HHDA processes
Matt Roper	ELEXON (Design Authority)	✓	✓	
Allan Toule	ELEXON (Subject Matter Expert)			✓
Darren Draper	ELEXON (Subject Matter Expert)	✓		
Ed Morris	ELEXON (Subject Matter Expert)	✓		
Jemma Williams	ELEXON (Subject Matter Expert)	✓		
Katie Wilkinson	ELEXON (Subject Matter Expert)	✓	☎	
Victoria Moxham	ELEXON (Subject Matter Expert)		✓	
Abidemi Akeredolu	ELEXON (Business Analyst)			☎

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APPENDIX 2: GLOSSARY AND REFERENCES

Acronyms

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

Acronyms	
Acronym	Definition
API	Application Programming Interfaces
BM	Balancing Mechanism
BSC	Balancing and Settlement Code
BSCP	BSC Procedure
BSP	Balancing Service Provider
CMRS	Central Meter Registration Service
CRA	Central Registration Agent
CSD	Code Subsidiary Document
CVA	Central Volume Allocation
DC	Demand Capacity
DTC	Data Transfer Catalogue
DTN	Data Transfer Network
EB GL	European Balancing Guidelines
ECOES	Electricity Central Online Enquiry Service
ECVN	Electricity Contract Volume Notification
EFSD	Effective from Settlement Date
EFTD	???
EMR	Electricity Market Reform
EMRS	Electricity Market Reform Settlement
FAA	Funds Administration Agent
FPN	Final Physical Notification
GB	Great Britain
GC	Generation Capacity
GCF	Group Correction Factor
GSP	Grid Supply Point
HHDA	Half Hourly Data Aggregator
IWG	Industry Workgroup
LLF	Line Loss Factor

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Acronyms	
Acronym	Definition
MDD	Market Domain Data
MOA	Meter Operator Agent
MPAN	Meter Point Administration Number
MRA	Master Registration Agreement
MRASCo	Master Registration Agreement Service Company
MS	Metering System
MSID	Metering System Identification
MVRN	Meter Volume Reallocation Notification
PAF	Performance Assurance Framework
RR	Replacement Reserve
SAA	Settlement Administration Agent
SAD	Self-Assessment Document
SBMU	Secondary BM Unit
SMRS	Supplier Meter Registration Service
SVAA	Supplier Volume Allocation Agent
TERRE	Trans-European Replacement Reserve Exchange
TLMij	Transmission Loss Multiplier per BM Unit (i) per Settlement Period (j)
TSO	Transmission System Operator
VLP	Virtual Lead Party
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
DXXXX	Metering System Half Hourly Metered Data
D0354	EMR Reporting Notification
D0355	EMR Reporting Confirmation
D0356	EMR Reporting Rejection
D0357	Half Hourly Metered Data for EMR

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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.

Page(s)	Description	URL
3	Industry Workgroups webpage	https://www.elexon.co.uk/committees-meetings/working-groups/
3	P344 Project Terre webpage	https://www.elexon.co.uk/mod-proposal/p344/
5	BSCP38 'Authorisations'	https://www.elexon.co.uk/bsc-and-codes/bsc-related-documents/bscps/?show=all
5	BSC Section O 'Communications under the Code'	https://www.elexon.co.uk/bsc-and-codes/balancing-settlement-code/bsc-sections/
5	BSCP70 'CVA Qualification Testing for Parties and Party Agents'	https://www.elexon.co.uk/bsc-and-codes/bsc-related-documents/bscps/?show=all
6	BSCP301/04(a)	https://www.elexon.co.uk/bsc-and-codes/bsc-related-documents/bscps/?show=all
6	BSCP537 'Appendix 1 Self Assessment Document (SAD)	https://www.elexon.co.uk/bsc-and-codes/bsc-related-documents/bscps/?show=all
6	BSCP537 'Qualification process for SVA Parties, SVA Party Agents and CVA MOAs'	https://www.elexon.co.uk/wp-content/uploads/2017/10/BSCP537-v8.0.pdf
6	BSCP 509 'Changes to Market Domain Data'	https://www.elexon.co.uk/bsc-and-codes/bsc-related-documents/bscps/?show=all
7	BSCP65 'Registration of Parties and Exit Procedures'	https://www.elexon.co.uk/bsc-and-codes/bsc-related-documents/bscps/?show=all
8	Issue 70 webpage	https://www.elexon.co.uk/smg-issue/issue-70/
8	Issue 71 webpage	https://www.elexon.co.uk/smg-issue/issue-71/
10	Change Proposal (CP) 1510 webpage	https://www.elexon.co.uk/change-proposal/cp1510-allow-online-management-registrations-market-entry-market-exit/
10	BSC Section S 'Supplier Volume Allocation'	https://www.elexon.co.uk/bsc-and-codes/balancing-settlement-code/bsc-sections/
15	MRASCo Change Tracker	https://www.mrasco.com/changes/change-tracker/
19	Registration IWG webpage	https://www.elexon.co.uk/group/p344-iwg1-registration-processes/group-meetings/

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External Links		
Page(s)	Description	URL
19	Market Entry timelines	https://www.elexon.co.uk/reference/market-entry/
22	MRASCo website	https://public.huddle.com/a/xVowYzN/index.html

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