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| Commercial in confidence |
| BSC Change Business Requirements |
| P375 |
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| Paulina Stelmach, Tom Darwen  [version]  [Date Issued] |

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| P375 Business Requirements |

# Document History

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| Date | Version | Author | Reviewers | Description |
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| 02 May 2019 | 0.4 | Tom Darwen | Damian Clough | Second draft |
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# Approvals

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# INTRODUCTION

## Purpose

The BSC Change Business Requirements document is produced as part of the ‘End to End BSC Change Process’ during the BSC Change Assessment stage. It is produced in line with ELEXON’s standards for Business Analysis.

The purpose of this document is to communicate the Business Requirements of BSC Change P375 to industry members and service providers. It enables an initial impact assessment to be carried out by a Service Provider and any impacted stakeholder.

In addition, it describes the anticipated impact on BSCCo (people, processes and systems), BSC Agents, the BSC, Code Subsidiary Documents, and other Configurable Items as well as BSC Parties and Party Agents.

# BSC Change Summary

## BSC Change P375 Problem Statement

The BSC currently only allows metering installed at the defined Boundary Point to be used for Settlement purposes. However, we anticipate that there will be a future need for new and/or different types of customers and business to participate in the BM and other alternative balancing products. We have observed an increased interest in new business models with diverse and smaller scale assets such as EV charging units and domestic appliances. This creates a need to allow Settlement to acquire data from metering behind the Boundary Point, i.e. at the asset, which is delivering the Balancing Service. This Issue arose through the development of the Project TERRE (Trans European Replacement Reserves Exchange) arrangements through BSC [Modification Proposal P344 ‘Project TERRE implementation into GB market arrangements’](https://www.elexon.co.uk/mod-proposal/p344/), but may become relevant to other Balancing Services in the future.

The need to allow Settlement from metering behind the Boundary Point is due to the desire to reduce any potential barriers to entry to participate in balancing products.

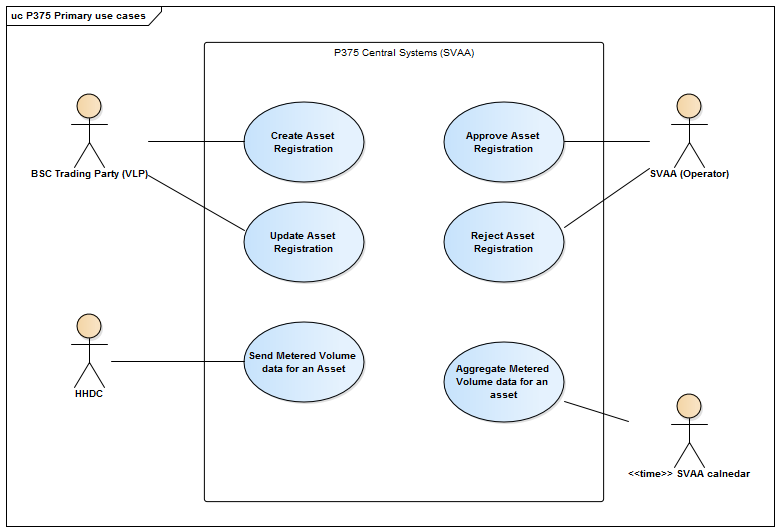
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| --- | --- |
| Element | Description |
| The problem of… | Settling only Balancing Service Metered Volumes collected at a Boundary Point |
| Affects… | Virtual Lead Parties (VLPs)  BSCCo  SVAA |
| The impact of which… | Means that the metering at the site Boundary Point does not allow for differentiation between the delivery of Balancing Services and other independent actions on site. As a result, there may be a difference between the forecasted metering volumes of the site (Physical Notification) and the Settled metered volumes due to the inability to differentiate. This difference may create an adverse Imbalance Position or Non Delivery Charge to the Provider of the Balancing Services, which may not be related to the actual delivery of the Balancing Service and impact upon the System. |
| A successful solution would… | Asset metering will replace the Boundary Point meter within the Secondary Balancing Mechanism Unit when nominated by the VLP. The solution will allow Settlement of the Balancing Service to use metering installed at the asset with volumes adjusted by line loss factors up to the GSP (equivalent of Boundary Point volumes). The metering installed will meet Code Of Practice standards in terms of requirements and accuracy. Performance Assurance will work to ensure Settlement Risk mitigated when using asset metering. |

## BSC Change P375 Objectives

The objective of the P375 solution is to define the standards of metering for the behind the Boundary Point meters, the application of line loss factors methodology and establishment of assurance measures required for a VLP when performing the P375 process. A (centrally) administered meter registration system will exist for the Asset Meters with the requisite changes to the accompanying Code Subsidiary Documents and Configurable Items. The P375 solution will also enable the site Supplier’s position to be accurately adjusted if there are balancing actions taken by the VLP behind the Supplier’s meter.

## BSC Change P375 Scope

The scope of P375 are amendments BSC procedures and systems enable the registration and compliance of asset meters for use by the Virtual Lead Party (VLP) Secondary Balancing Mechanism Unit. The diagram below represents a high-level main use cases (SVAA core process) reflecting P375 deliverables.



However, the process will also affect the following areas:

* Imbalance Position adjustment by SAA
* Metering Code of Practice (definitions)
* Metering Dispensations
* Line Loss Factor process
* Trading Disputes
* Performance Assurance for new metering
* Customer Operations

## References

We will use existing flows created for TERRE. Their use for the TERRE process is outlined in BSCP602 SVA Metering System Balancing Services Register. Please see Appendix A for the complete list of flows that exist for VLPs. This means minimum system changes are needed to the Data Transfer Network (DTN) and existing flows. We would also need to introduce a definition for Asset Metering System Identifiers (AMSIDs) and add the additional/optional fields in the Supplier Volume Allocation Data Catalogue.

|  |  |  |
| --- | --- | --- |
| Document | Author | Date |
| P375: ‘Settlement of Secondary BM Units using metering behind the site Boundary Point’ BSC Modification proposal | Saskia Barker,  Flexitricity | 5 January 2017 |
| P375 Initial Written Assessment | Steven Bradford | 11 December 2018 |
| P375 Assessment Report Consultation | Tom Darwen |  |
| [BSP602 ‘Supplier Volume Allocation Metering System Balancing Services Register’](https://www.elexon.co.uk/documents/bsc-codes/bscps/bscp602/) (see relevant flows below) | ELEXON |  |
| [Supplier Volume Allocation Data Catalogue Volume 1: Data Interfaces](https://www.elexon.co.uk/documents/bsc-codes/business-definition-documents/sva-data-catalogue-volume-1-2/) | ELEXON |  |
| [P344 Project TERRE Business Requirements](file:///G:\Public\Modifications\Closed\P300+\P344%20-%20TERRE\Business%20Requirements) | ELEXON |  |

# BUSINESS REQUIREMENTS

## Current State (As-Is situation)

The process for collecting and aggregating Metered Volume data for the Assets located behind the Boundary Point does not exist yet. However, we introduced a similar process as a part of BSC Modification P344 “Project TERRE implementation into GB market arrangements”. Under P344, the Virtual Lead Parties register with Supplier Volume Allocation Agent (SVAA) the Boundary Point Metering System Identifiers (MSID). These MSIDs are registered against the Secondary BM Units. SVAA validates the information provided by the VLP and upon successful registration, it instructs a HHDC to report Metered Volume data for a given MSID in line with the SVAA calendar. SVAA then aggregates required data and passes it on to SAA, which in turn adjust Imbalance Position of the BSC Party who is a Registrant of the Boundary Point MSID used by the VLP.

SVAA holds a central register of MSIDs that are registered against Secondary BM Units for all VLPs.

## Assumptions

The following list represents assumptions that should be taken into consideration when reading the Business Requirements. Please note that for the purpose of this document an ‘assumption’ is defined as a thing (e.g. action, person, document, data item etc.) that is believed to be true provided that P375 is implemented and becomes a part of Business As Usual (BAU) process (i.e. we do not aim to change any of these assumptions).

1. Only Virtual Lead Parties will be able to participate in the process introduced by P375.
2. A VLP will have a choice to either deliver Balancing Services measured at Boundary Point (BP) MSID (as-is process introduced by P344) or measured at Asset Metering System located behind the BP MSID (new process introduced by P375), but not a combination of both.
3. AMSID allocated by the SVAA will take the same format as MSID. SVAA will reserve a Distributor Short Code in the Market Domain Data to ensure that AMSIDs are easily recognised by all Market Participants and BSC central systems.

## Business Requirements

The following table lists the business requirements for P375. They are prioritised as follows:

‘M’ = Must have

‘S’ = Should have

‘C’ = Could have

‘W’ = Won’t have this time

Please note that items in **bold** in the following Business Requirements tables are defined in the Glossary section of this document. For ease of reading, these items are in bold only the first time they appear in the Business Requirements. The items that have their respective meaning set out in either in the Balancing and Settlement Code or any of the Code Subsidiary Documents are not listed in the Glossary.

|  |  |  |  |
| --- | --- | --- | --- |
| **Ref. no** | **Area** | **Business Requirement** | **Priority** |
| P375-BR1 | Registration | Supplier Volume Allocation Agent must create an **Asset Meter Central Register** (AMCR). |  |
| P375-BR2 | Registration | For each **Asset Metering System** (AMS) participating in Balancing Services the Virtual Lead Party (VLP) must apply for a unique **Asset Meter System Identifier** (AMSID) from the SVAA.  For avoidance of doubt, where the VLP decides to use the Boundary Point MSID to provide Balancing Services, the VLP does not need apply for an AMSID. |  |
| P375-BR3 | Registration | For each Asset Metering System the Virtual Lead Party must provide the following information:   * The Secondary BM Unit Id * GSP Group Id * Associated Supplier Boundary Point MSID * The **connection voltage** at the Asset Meter System * The connection voltage at the Supplier Boundary Point MSID * Balancing **delivery capacity** of the asset in kW * **Asset type** (e.g. diesel generator, battery storage unit, Electric Vehicle charging unit) * AMS make and model * AMS IEC standard |  |
| P375-BR4 | Registration | The SVAA should validate that the information provided by the VLP is correct. |  |
| P375-BR5 | Registration | Where the validation was successful for a given Asset Metering System, then the SVAA must allocate AMSID against that Asset Metering System within X Working Days. |  |
| P375-BR6 | Registration | Virtual Lead Parties must provide SVAA with evidence that the asset is **independent of other site loads**. |  |
| P375-BR7 | Registration | The SVAA must check that the Asset Metering System is compliant against the Asset Metering System Code of Practice standard(s). |  |
| P375-BR8 | Registration | The SVAA must allocate Line Loss Factor Class against an Asset Meter System. |  |
| P375-BR9 | Registration | Virtual Lead Parties must be able to raise a Metering Dispensation against the Asset Meter System. |  |
| P375-BR10 | Registration | Virtual Lead Parties must notify SVAA upon change of ownership of Asset Metering System. |  |
| P375-BR11 | Appointment | Virtual Lead Party must appoint a HH Data Collector. The process must mirror existing appointment performed by Suppliers. |  |
| P375-BR12 | Appointment | Virtual Lead Party must appoint a Meter Operator Agent. The process must mirror existing appointment performed by Suppliers. |  |
| P375-BR13 | Appointment | Supplier Volume Allocation Agent must instruct Half Hour Data Collector to report Metered Volume data to Supplier Volume Allocation Agent (once the AMSID is successfully registered in the Asset Meter Central Register). |  |
| P375-BR14 | Appointment | Half Hour Data Collector must confirm or reject the Supplier Volume Allocation Agent appointment within 1 WD from receiving the appointment. |  |
| P375-BR15 | Appointment | Where a HHDC rejects an appointment, the SVAA should liaise with the HHDC and Supplier to understand the reason for rejection so it can resolve and subsequently confirm the appointment (by resending a D0354). |  |
| P375-BR16 | Aggregation and Imbalance | In accordance with Supplier Volume Allocation Agent Settlement Calendar, for each Settlement Day, the Half Hour Data Collector must report HH Metered Delivered Volumes for all AMSIDs it has been instructed to report on. Half Hour Data Collector must report these volumes in time to achieve the dates set out in prevailing Supplier Volume Allocation Agent calendar for a given BSC Year.  The following information must be submitted:   * Asset Metering System Identifier (AMSID) * Secondary Balancing Mechanism Unit ID * GSP Group Id * Consumption Component Class Id * Metered Consumption in kWh (per Settlement Period) * Line Loss Factor Class Id * Settlement Date * Settlement Period Id * Volume Allocation Run |  |
| P375-BR17 | Aggregation and Imbalance | Supplier Volume Allocation Agent must aggregate Metered Volumes for the Asset Metering Systems located behind the Boundary Point meter. |  |
| P375-BR18 | Aggregation and Imbalance | Supplier Volume Allocation Agent must apply Line Loss Factors to the metered volumes received from Half Hour Data Collector for the Asset Metering Systems when performing the data aggregation. |  |
| P375-BR19 | Aggregation and Imbalance | When aggregating metered data for a given Settlement Day, Supplier Volume Allocation Agent must check that it has received Metered Data for all AMSIDs it expects to have received Metered Data for. Missing Metered Data will trigger Supplier Volume Allocation Agent to follow the process in BSCP508[[1]](#footnote-2) 3.2 A.3. |  |
| P375-BR20 | Aggregation and Imbalance | Supplier Volume Allocation Agent must send the aggregated volumes to Settlement Administration Agent. |  |
| P375-BR21 | Aggregation and Imbalance | Settlement Administration Agent must adjust the Imbalance Position of the BSC Party who is responsible for the Boundary Point Metering System. |  |
| P375-BR22 | Assurance | Supplier Volume Allocation Agent must only aggregate Metered Volumes of valid (independently controlled) Asset Metering Systems before sending them to Settlement Administration Agent. |  |
| P375-BR23 | Assurance | Supplier Volume Allocation Agent could (as required) review from time to time the Asset registration evidence as a part of assurance activities. |  |
| P375-BR24 | Assurance | Supplier Volume Allocation Agent could deem AMSID as uncontrollable and therefore invalid for the purposes of P375 because of evidence review. |  |
| P375-BR25 | Assurance | Supplier Volume Allocation Agent should not allow the same AMSID to be registered for other processes than the P375 (e.g. such MSID cannot be registered against a Secondary BM Unit). |  |
| P375-BR26 | Assurance | The AMSIDs created by SVAA need to be unique, i.e. they cannot be a duplication of standard MSIDs nor the Pseudo Metering Points. |  |
| P375-BR27 | Assurance | VLP should be able to raise a Trading Dispute against an Asset Metering System Metered Volumes. |  |

## Business Rules

The following Business Rules define the conditions and constraints of the P375 process. The systems and manual processes performed for P375 will conform to the following principles.

|  |  |  |  |
| --- | --- | --- | --- |
| **Ref. no** | **Area** | **Business Rule** | **Comments** |
| P375-R1 | Registration | Only a Virtual Lead Party may register Asset Meter Identifiers. |  |
| P375-R2 | Registration | Asset Meter should only be allocated to one Boundary Point MSID at any point in time. |  |
| P375-R3 | Registration | AMSID should only be registered against only one VLP at any point in time. |  |

# GLOSSARY

Below table represents terms which we will introduce as a part of this P375 Modification or which are defined outside the Balancing and Settlement Code. Terms, which are defined in the Balancing and Settlement Code or Code Subsidiary Documents, were omitted.

|  |  |
| --- | --- |
| **Term** | **Meaning** |
|
| Asset Meter Central Register (AMCR) |  |
| Asset Metering System  (AMS) |  |
| Asset Metering System Identifier (AMSID) |  |
| Asset type |  |
| Balancing Service |  |
| Connection Voltage |  |
| delivery capacity |  |
| IEC standard |  |
| Independent of other site loads |  |
| Other site loads |  |
| Physical Notification (PN) |  |
| Pseudo Metering Point | According to Master Registration Agreement (MRA) “additional set(s) of Metering Point Administration Data, up to eight, or more if agreed with all affected Parties, associated with a single Half Hourly Metering Point created to facilitate the splitting of energy volumes between Suppliers at such Metering Point. Each Pseudo Metering Point shall only exist whilst the energy volumes at the Metering Point are scheduled to that Pseudo Metering Point; |

## APPENDIX A

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Flow Ref | Data Flow Name | Source | From | To | Version |
| P0278 | MSID Pair Allocation | BSCP602 | Supplier  VLP | Supplier Volume Allocation Agent  Supplier Volume Allocation Agent | 001  001 |
| P0279 | Confirmation of MSID Pair Allocation | BSCP602 | Supplier Volume Allocation Agent  Supplier Volume Allocation Agent | Supplier  VLP | 001  001 |
| P0280 | Rejection of MSID Pair Allocation | BSCP602 | Supplier Volume Allocation Agent  Supplier Volume Allocation Agent | Supplier  VLP | 001  001 |
| P0281 | Loss of MSID Pair Allocation | BSCP602 | Supplier Volume Allocation Agent  Supplier Volume Allocation Agent | Supplier  VLP | 001  001 |
| P0282 | MSID Pair Delivered Volume Notification | BSCP602 | VLP | Supplier Volume Allocation Agent | 001 |
| P0283 | Rejection of MSID Pair Delivered Volume | BSCP602 | Supplier Volume Allocation Agent | VLP | 001 |
| P0284 | Confirmation of MSID Pair Delivered Volume | BSCP602 | Supplier Volume Allocation Agent | VLP | 001 |
| P0285 | MSID Pair Delivered Volume Exception Report | BSCP602 | Supplier Volume Allocation Agent | VLP | 001 |
| P0286 | Disputed MSID Pair Allocation | BSCP602 | VLP | VLP | 001 |
| P0287 | Secondary Half Hourly Delivered Volumes | BSCP508 | Supplier Volume Allocation Agent | Supplier | 001 |
| P0288 | Secondary Half Hourly Consumption Volumes | BSCP508 | Supplier Volume Allocation Agent | VLP | 001 |
| P0289 | Secondary BM Unit Demand Volumes | BSCP508 | Supplier Volume Allocation Agent | Settlement Administration Agent | 001 |
| P0290 | Secondary BM Unit Delivered Volumes | BSCP508 | Supplier Volume Allocation Agent | Settlement Administration Agent | 001 |

1. BSCP508 – Supplier Volume Allocation Agent [↑](#footnote-ref-2)