

PUBLIC

BSC Change Business Requirements

P375

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ELEXON

P375 BUSINESS REQUIREMENTS

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Approvals

Date	Name	Role

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1. INTRODUCTION

1.1 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.

2. BSC CHANGE SUMMARY

2.1 BSC Change P375 Problem Statement

The BSC currently requires Bid-Offer Acceptances and Replacement Reserve Acceptances to be Settled using readings from Meters installed to measure flows of electricity at the defined Boundary Point. 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 through Secondary Balancing Mechanism Units (SBMU's). We have observed an increased interest in new business models with diverse and smaller scale assets such as EV charging units and domestic appliances. These smaller assets tend to share a site with other demand and generation assets, whose flows are all measured and then settled using the Boundary meter. When providing a balancing service it is necessary to submit a Physical Notification to the NETSO. The Physical Notification is a forecast of flows for the relevant settlement period. This Physical Notification turns final (FPN) at gate closure and is used by the NETSO to dispatch the asset and is subsequently used in the Settlement of the Balancing service.

If this FPN is inaccurate, it can lead to Imbalance and/or Non-delivery charges in settlement. As the Boundary Meter measures total flows for the site and not just the asset, Virtual lead Parties (VLPs) have stated difficulties in being able to forecast accurately the FPN and state this as a significant blocker for the provision of Balancing Services. 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. By allowing this, the VLP can install metering or use existing metering which can isolate the flows, which the VLP can therefore forecast accurately in its FPN.

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'](#), but may become relevant to other Balancing Services in the future. Whilst P344 will allow GB users to offer the TERRE product it also opens up access to the Balancing Mechanism for aggregators. Therefore, P375 removes a barrier to the BM and Balancing services settled through the BM and not just the TERRE product.

Element	Description
The problem of...	Settling only Balancing Service Metered Volumes collected at a Boundary Point

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Affects...	Virtual Lead Parties (VLPs) BSCCo SVAA Suppliers (through more accurate FPN and delivered volumes)
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 (Virtual Lead Party) of the Balancing Services and/or an incorrect adjustment or lack of adjustment to the Primary's Suppliers metered volumes, which may not be related to the actual delivery of the Balancing Service and impact upon the System.
A successful solution would...	Allow the VLP to register asset meters and create a new Asset MSID, which can then be nominated within a SBMU. The AMSID will be associated with all Boundary Point MSID pair(s), which it may impact on. VLPs will also then be able to utilise asset metering installed on site and registered with SVAA to calculate all other flows on site not metered through Asset metering flows thus negating the need to install extra asset meters. 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. The solution will allow Settlement of the Balancing Service to use both metering installed at the asset with volumes adjusted by line loss factors up to the GSP (equivalent of Boundary Point volumes) and Boundary Point meters. The VLP will decide which metering option best suits their needs from a commercial perspective The submission of the FPN and how it is used within settlement will not alter due to P375, but opening up the option to use Asset Metering will allow VLP's to potentially submit more accurate FPN's thus removing a significant barrier.

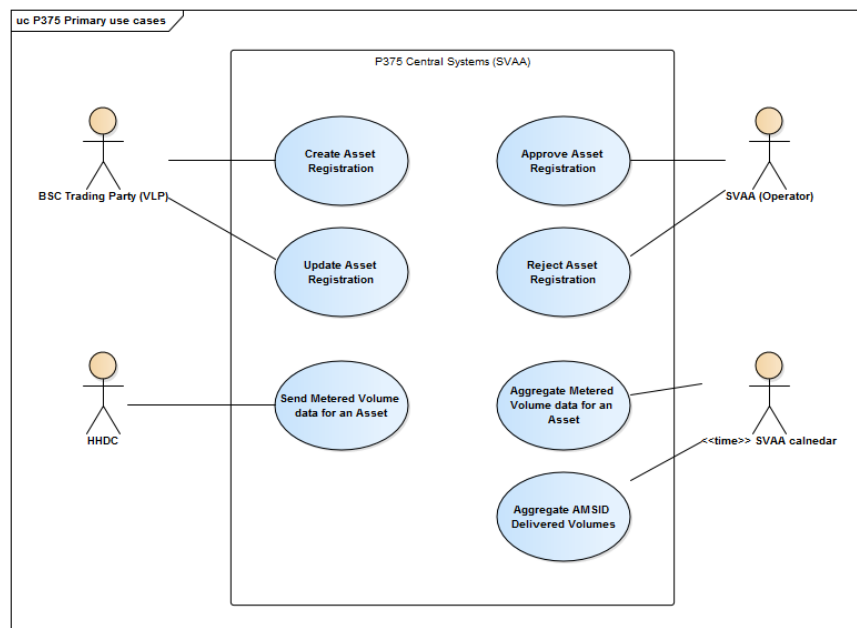
2.2 BSC Change P375 Objectives

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.

2.3 BSC Change P375 Scope

The scope of P375 are amendments to BSC procedures and systems to 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.

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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

2.4 References

We will use existing flows created for TERRE (where possible) and new flows where new data is required. Their use for the TERRE process is outlined in BSCP602 SVA Metering System 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.

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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' (see relevant flows below)	ELEXON	
Supplier Volume Allocation Data Catalogue Volume 1: Data Interfaces	ELEXON	
P344 Project TERRE Business Requirements	ELEXON	

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3.1 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 then instructs a HHDA to report Metered Volume data for a given MSID in line with the SVAA calendar. VLPs are obligated to provide the Delivered Volumes to SVAA for adjustment of the Supplier Imbalance position. SVAA then aggregates both Metered Volume and Delivered Volume 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.

3.2 P375 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 with a Secondary BM Unit(s) will be able to participate in the process introduced by P375.
2. Where a Company wishes to participate in the provision of the Balancing Services and the Balancing Mechanism by using Assets located 'below' the Boundary Point then that Company needs to become a signatory to the Balancing and Settlement Code, i.e. a BSC Party (Virtual Lead Party). The process for becoming a BSC Party for P375 will remain the same as the process introduced for P344. For more information please see [P344 Business Requirements](#)¹ (BR1 and BR2), as well as [BSCP65 – Registration of Parties and Exit Procedures](#).
3. A VLP will have a choice to either deliver Balancing Services measured at a 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). Where one VLP chooses to use the BP MSID for Settlement another VLP cannot then use that same BP MSID pair. Any other VLP with assets located 'behind' that BP wishing to participate in Balancing Mechanism will be mandated to apply for an AMSID(s) and register AMSID Pair(s).
4. A VLP could register to its Secondary BM Unit(s) a mix of MSID Pairs and AMSID Pairs. See Scenario 9 in section 3.5 of this document.
5. 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. For avoidance of doubt, AMSID should not be mistaken with neither Primary MSID nor Secondary MSID².
6. An 'AMSID Pair' means one Import Asset Metering System and, where applicable, one Export Asset Metering System situated behind one or more Boundary Points for the purposes of providing Replacement Reserve

¹ P344 Final Modification Report, P344-FMR-C-P344-Business-Requirements-v5.0.pdf

² BSCP550 'Shared SVA Meter Arrangement' Section 1.3.

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(RR) or Balancing Mechanism (BM) Services. To clarify an AMSID Pair must contain a SVA Import Asset Metering System but does not always have to have to contain a SVA Export Asset Metering System.

7. As a part of the P375 AMSID Pair registration process, the VLP will be mandated to list all Boundary Point MSID Pairs through which the Metered Volumes for a given Asset may be recorded. This relationship will be used when validating a VLP's allocated delivered volumes to a BP MSID pair. During the validation of registration data, SVAA will identify and store information on the Half-Hourly Data Aggregator(s) for each of the Boundary Point MSIDs listed by the VLP.
8. Where the AMSID Pairs were successfully registered by the VLP, SVAA will have to instruct the Half Hourly Data Aggregator for the affected Boundary Point MSIDs to provide data for each MSID in the Boundary Point MSID Pairs listed by the VLP. This will be necessary for assurance purposes.
9. Where on a given site, there are more than one asset located behind the Boundary Point, the SVAA may be required to calculate actual metered volumes for an AMSID pair using a new residual balancing process. For example, the VLP may request that metered volumes equals BP MSID volumes less other AMSID's volumes relating to the BP MSID. The process will be analogous to the existing difference metering³ process. The 'differencing' will be applied during aggregation of Metered Data up to a Secondary BM Unit level.
10. When submitting the Final Physical Notification (FPN) to the NGESO, a VLP will have to ensure that their FPN reflects the sum of metered data expected at a Boundary Point MSID Pair or AMSID Pair, depending on what is registered in the VLP's Secondary BM Unit. Please note that the VLP will have to account for losses to/from the Asset Meter as well as from the Boundary Point to the GSP when submitting the FPN. For avoidance of doubt – P375 will not change the process of FPN submission to the NGESO or adjust the FPN when it is used in settlement.
11. Once an AMSID Pair is registered into SVAA as located behind a given Boundary Point MSID Pair, that association (i.e. the location of the AMSID Pair) is fixed, i.e. AMSID Pair cannot be moved to a different location in the country. However, we recognise that the configuration of a given site can change (e.g. the Metering System is exchanged or part of the network decommissioned); Therefore, AMSID Pair can gain new associations. In such instance, VLP will have to provide SVAA with a proof that the Boundary Point MSID Pair has changed (or a new one was added). SVAA (after reviewing the evidence) will change the associations in line with the changes to the site configuration.
12. The Asset Metering System must conform to the relevant Code of Practice (COP) requirements. A new Code of Practice (COP11) will be construed to describe requirements for Asset Metering System. In addition, Asset Meter must be installed and maintained by either a BSC Qualified Meter Operator Agent (MOA) in accordance with provisions of BSC Section J, or a 'BSC MOA alternative'. VLP can elect to use a 'BSC MOA Alternative' only where the Asset Meter [meets the criteria of Codes of Practice 4 or 5]. The 'BSC MOA Alternative' will install, commission, test, maintain, and rectify faults in respect of SVA Asset Metering Equipment. They will also produce an equivalent of Meter Technical Details (MTD) for a new Asset Meter. However, it will be the responsibility of the Virtual Lead Party to store, maintain and send to its agents the MTDs for the Asset Meter. The criteria for 'BSC MOA alternative' will be set out in one of the Code Subsidiary Documents, as a part of P375 document change process. For avoidance of doubt, the Asset Meters that meet the criteria of COP1, COP2 and COP3 (Asset Metering Types 1, 2 and 3) must be maintained by a BSC Qualified MOA.
13. Where a device is not on the list of the COP11 approved devices, an applicant will be mandated to apply to BSCCo to add a given Metering device to the approved list. An applicant is any party who wishes to add the device to the list. This can be done concurrently to the AMSID Pair registration process. For avoidance of doubt, AMSID registered against non-approved Asset Meter device will be allowed to provide Balancing

³ 8.4.3 BSCP514 'SVA Operations for Metering Systems Registered in SMRS'

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Services (provided all other conditions are met), as long as the Party applied to add the device to the approved list. If an Asset Meter device is found not to conform to the COP11 requirements, SVAA will have a remit to stop collating Metered Volume data for AMSID until a compliant Asset Meter is installed.

14. Where a device qualifies for a MOA Alternative, the VLP can elect to use a party that will dial the Asset Meter and pass on the metered data to HHDC ('Party responsible for dialling the Asset Meter'). Such a party can be the VLP, HHDC, MOA Alternative or the Asset Meter manufacturer. Such a party must pass the protocol testing to prove that they can access the data from the Asset Meter and convert such data to a format suitable for submission to the HHDC. We will amend the provisions of BSCP601 to outline the process. For avoidance of doubt, the Asset Meters that Half Hourly Integral Outstations that are designed to meet the criteria of Asset Metering Types 1, 2 and 3 within COP11 must be dialled and protocol tested by a BSC Qualified HHDC.
15. A VLP will have to put in place contractual arrangement and appoint a BSC Qualified MOA or CSD compliant MOA ('BSC MOA Alternative') who will install and maintain a COP compliant Asset Metering System. The processes for appointing a MOA should closely follow the existing provisions as set out in BSCP514.
16. A VLP will have to put in place contractual arrangement and appoint a BSC Qualified Half Hourly Data (HHDC) Collector who will record and forward to SVAA Metered Volumes. The processes for appointing a HHDC should closely follow the existing provisions as set out in BSCP502⁴.
17. A VLP will provide SVAA with Delivered Volumes for each AMSID within AMSID Pair whenever a Balancing Service was delivered.
18. The P375 process shall distinguish two VLP roles. A VLP can be an 'Asset Metering System Registrant' (who is responsible for requesting AMSID from SVAA, appointment of Agents and metering systems compliance against COP) and/or a VLP may wish to register such an AMSID against their Secondary BM Unit. The reason for distinguishing the two roles is to allow two VLPs to use the same AMSID at the same time (i.e. where a differencing arrangement is used and one VLP uses it 'as-is' Metered Volume data and the other VLP needs the AMSID to obtain the 'remainder'). In such instance, although two VLPs would use the same AMSID for Settlement, only one of them would be responsible for the metering and Agent appointments. However, please note that where a VLP is the only VLP on site and the Asset Meter cannot be installed at the asset, such a VLP would fulfil both roles.
19. As P375 will use some of the data at a different level of granularity, some existing SVAA calculation steps of Metered Volume for a Secondary BM Unit and Delivered Volume for a Secondary BM Unit will be affected. However, the following steps will remain the same:
 - Secondary BM Unit Delivered Volume calculation. SVAA calculates Secondary BM Unit Delivered Volume ('QVMD_{2NLSKj}') by grouping the Metering System Delivered Volume ('QVMD_{Kj}') by the Secondary BM Unit in line with the information provided by the VLP in the SVA Metering System Register.
 - Secondary BM Unit Supplier Delivered Volume calculation. As part of each SVA aggregation Run, SVAA aggregates the Line Loss and GSP Group Correction Factor adjusted Delivered Volume data. For avoidance of doubt, the aggregation will now include the AMSID Pair related data submitted for P375 purposes, as well as MSID Pair related data submitted for P344 related purposes. Both should feed into calculation of Secondary BM Unit Supplier Delivered Volume ('VBMUSDV_{23j}') in MWh for each Secondary BM Unit. Once calculated, SVAA should report the Secondary BM Unit Demand Volume data to the Settlement Administration Agent (SAA).

⁴ BSCP502 – Half Hourly Data Collection for SVA Metering Systems Registered in SMRS

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3.3 Business Requirements

The following table lists the business requirements for P375. The requirements are split into five main areas of the process:

- Registration of Asset Metering Systems and receipt of AMSID
- Allocation of AMSID Pairs to a Secondary BM Unit
- Appointments
- Aggregation and Imbalance
- Assurance

The requirements are grouped by process area they belong to (e.g., 'Registering AMSIDs and appointing agents' category). Each requirement is stated at high-level and additional description is provided where necessary.

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	Business Requirement
<u>Registering Asset Metering System, allocating AMSIDs and appointing agents</u>	
Before any Asset Metering System can be used in Settlement, a VLP (acting as an 'Asset Metering System Registrant' for that Asset Metering System) shall register the Asset Metering System with SVAA, ensure that appropriate Settlement Metering Equipment is installed, and appoint a Qualified HHDC and Qualified MOA	
P375-BR1	SVAA must create and maintain a Register of Asset Meters. For the purposes of these Business Requirements, we shall call this register the Asset Meter Register (AMCR).
P375-BR2	<p>Asset Meter Register must store the following information.</p> <p><u>Requirement Description</u></p> <p>Within the Asset Meter Register (AMR), SVAA must be able to receive and store details of all Asset Metering Systems (AMS) (past and current) registered by Virtual Lead Parties (VLPs).</p> <p>The details (data) to be stored:</p> <ul style="list-style-type: none"> Import/Export AMSID Data Collector Id (MPID⁵) for Import AMSID/Export AMSID HHDC Effective from Date HHDC Effective to Date Meter Operator Id [MPID] for Import AMSID/Export AMSID (where applicable) MOA Effective from Date (where applicable) MOA Effective to Date (where applicable) Associated Supplier Boundary Point Import MSID(s) The connection voltage of the Asset Metering System The connection voltage of the Supplier Boundary Point MSID Balancing delivery capacity of the asset in kW

⁵ As defined in the SVA Data Catalogue volume 2.

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	<p>Asset type (e.g. diesel generator, battery storage unit, Electric Vehicle charging unit)</p> <p>Measurement Class</p> <p>AMS make and model</p> <p>AMS IEC standard</p> <p>Asset Meter Serial Number</p>
<p><u>Asset Meter Registration Service</u></p> <p>The SVAA shall provide an Asset Meter Registration Service for VLPs to register details of Asset Metering Systems for which they will become the Registrant</p>	
P375-BR2	<p>VLP must register the Asset Metering System with SVAA.</p> <p><u>Requirement Description</u></p> <p>When completing a registration of an Asset Metering System so as to receive an AMSID, the Virtual Lead Party who will fulfil the role of 'Asset Metering System Registrant' must provide the following information:</p> <p>All Boundary Meters on the site have been registered. For the purposes of these Business Requirements these will be called Associated MSID Pairs</p> <p>The connection voltage at the Asset Meter System</p> <p>The connection voltage at the Supplier Boundary Point MSID</p> <p>Asset type (e.g. diesel generator, battery storage unit, Electric Vehicle charging unit)</p> <p>AMS make and model</p> <p>AMS IEC standard</p> <p>Asset Meter Serial Number</p> <p><u>Optional Information</u></p> <p>The optional information will not be checked and is not a requirement but could provide useful information for Industry</p> <p>Capacity of Asset</p> <p>Asset Type i.e. Diesel, Battery, Demand Reduction</p> <p>For avoidance of doubt, when registering Asset Metering Systems the VLPs should use a defined flow format published on ELEXON website and submit to SVAA (the data flow (P-flow) will be defined in the Code Subsidiary Document).</p>
P375-BR3	<p>SVAA must validate AMSID request.</p> <p><u>Requirement Description</u></p> <p>Within 1 Working Day (WD) of receiving a request for a new AMSID(s), the SVAA must check that the required information is complete and valid. SVAA may liaise with the VLP that submitted the request to seek additional information, corrections or a resubmission of the request.</p> <p>If, following any liaison between SVAA and the VLP, SVAA believes the request to be invalid, then SVAA will reject the request and notify the VLP by email or other electronic means of its reason.</p>

Commented [DC1]: Calculated dynamically by SVAA partially using the Measurement Class which is registered by the VLP

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	<p>SVAA should use information contained within its own database or in external databases (e.g. SVAA may use, but is not limited to, ECOES, Ofgem's Public Register and Companies House) to check the completeness, accuracy and validity of a request.</p> <p>SVAA could check:</p> <p>Whether Boundary Point MSID(s) in the request is 'live' (not disconnected).</p> <p>The Asset Meter is Code of Practice compliant (see BR10)</p> <p>All Boundary Meters on the site have been registered. For the purposes of these Business Requirements these will be called All Associated MSID Pairs have been registered</p> <p>Asset Meters are not being used within another Asset Metering System</p> <p>The organisation submitting the request is a BSC Party (VLP).</p> <p>Please note that SVAA should not be limited to the above checks and could deploy a different check where appropriate.</p>
P375-BR4	<p>SVAA must allocate AMSIDs.</p> <p><u>Requirement Description</u></p> <p>Where the validation was successful for a given Asset Metering System, then the SVAA must allocate AMSID against that/those Asset Metering System(s)</p>
P375-BR5	<p>SVAA must notify VLP of AMSID application outcome.</p> <p><u>Requirement Description</u></p> <p>Within 1 WD of determining whether to approve or reject, the SVAA must inform VLP of the result.</p>
P375-BR6	<p>SVAA should not allow AMSID to be registered for other processes than the P375 (e.g. such MSID cannot be registered against a Primary BM Unit).</p>
P375-BR7	<p>The AMSIDs created by SVAA need to be unique, i.e. they cannot be a duplication of standard MSIDs nor the Pseudo Metering Points.</p>
P375-BR8	<p>The VLP could list more than one meters against one AMSID as long as the Metering Systems measure the Metered Volumes for Assets located on the same site 'below' the same Boundary Point(s).</p> <p>For avoidance of doubt, the use of asset metering is a commercial choice. The VLP will decide what metering solution best suits each individual site.</p>
P375-BR9	<p>The VLP will have to specify how many Import and Export AMSIDs the SVAA needs to allocate for a given Asset.</p>
P375-BR10	<p>MOA must install and maintain Code of Practice (COP) compliant Asset Metering System.</p> <p><u>Requirement Description</u></p> <p>Asset Metering System must conform to the COP11 requirements. Following meter installation, MOA should send information about the meter (AMS make and model, AMS IEC standard, Asset Meter Serial Number) to the VLP. For existing Asset equipment that have not yet being registered in the AMR the VLP may provide these details to the MOA.</p>

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P375-BR11	<p>VLP must appoint HHDC.</p> <p><u>Requirement Description</u></p> <p>Virtual Lead Party must appoint a Half Hourly Data Collector (HHDC) for each AMSID within AMSID Pair. The process must mirror existing appointment process performed by Suppliers in line with BSCP502 Section 3.2.</p> <p>For avoidance of doubt where a VLP and HHDC contractually agree on an appointment outside of Data Transfer Network (DTN), they will not be in a breach of provisions of BSCP502, as long as the VLPs and HHDC adhere to the timescales defined in the BSCP502.</p> <p>The workgroup confirmed that instruction from SVAA would not be required. VLP, upon HHDC appointment will instruct HHDC to provide Metered Data for AMSID to SVAA.</p> <p>The VLP will register the HHDC in the AMR including the effective to and from date. This can be done via a P flow yet to be determined</p>
P375-BR12	<p>VLP must appoint MOA.</p> <p><u>Requirement Description</u></p> <p>Virtual Lead Party must appoint a Meter Operator Agent or Meter Operator Agent Alternative for each AMSID within AMSID Pair. The process must mirror existing appointment performed by Suppliers in line with BSCP514 Section 5.2.</p> <p>For avoidance of doubt where a VLP and MOA contractually agree on an appointment outside of Data Transfer Network (DTN), they will not be in a breach of provisions of BSCP514, as long as the VLPs and HHDC adhere to the timescales defined in the BSCP514.</p> <p>The VLP will register the HHDC in the AMR including the effective to and from date. This can be done via a P flow yet to be determined</p>

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<u>Compliance Testing of Meters</u> BSCCo must publish and maintain a list of COP compliant Asset Meter make and models.	
P375-BR13	<p>BSCCo must publish and maintain a list of COP compliant Asset Meter make and models.</p> <p><u>Requirement Description</u></p> <p>BSCCo will create and maintain the list of COP Compliant meters. The list will contain at least make and model of the metering device. BSCCo must use reasonable endeavours to ensure that the list is at all times publicly available on the BSC Website.</p> <p>There must be at least one entity that can dial the Asset Meter and has been protocol approved before that Asset Meter can be added the approved list.</p> <p>All entities that can dial that Asset Meter Type will be listed under the protocol-approved section for the relevant Asset Meter type.</p>
P375-BR14	<p>An Applicant must add a new Asset Meter make and model to the COP 11 Meter list.</p> <p><u>Requirement Description</u></p> <p>Where the Asset Metering System metering device is not listed under the COP11 approved list of devices, the applicant must contact the BSCCo to assess Metering System's compliance.</p> <p>The approval process will be laid out in one of the Code Subsidiary Documents.</p> <p>The applicant can be any person, company or a entity who wishes that a given device were added to the list.</p>
<u>Registering AMSID Pairs against Secondary BM Unit</u> The Lead Party of a Secondary BM Unit shall be required to notify the SVAA of any AMSID Pairs that should be treated as belonging to that Secondary BM Unit; and details of the associated BP MSID Pairs.	

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P375-BR15	<p>SVA Metering System Register must store the following information.</p> <p><u>Requirement Description</u></p> <p>Within the SVA Metering System Register, SVAA must be able to receive and store details of all AMSID Pairs against the Secondary BM Units.</p> <p>The details (data) to be stored:</p> <p>Import AMSID</p> <p>Export AMSID</p> <p>The Secondary BM Unit Id</p> <p>GSP Group Id</p> <p>The AMSID Pair Effective From Settlement Date</p> <p>The AMSID Pair Effective To Settlement Date</p> <p>Associated MSID Pairs</p> <p>Indicator of how to use the MSID/AMSID Pair in Settlement i.e whether to apply Asset Differencing</p>
P375-BR16	<p>VLP shall allocate AMSID Pair(s) to the Secondary BM Units.</p> <p><u>Requirement Description</u></p> <p>Where a VLP wishes to use a given AMSID within their Secondary BM Unit for a provision of Balancing Services, the VLP must register the AMSID Pair in a SVA Metering System Register. Such a VLP must provide the following information:</p> <p>Import AMSID</p> <p>Export AMSID</p> <p>The Secondary BM Unit Id</p> <p>GSP Group Id</p> <p>The AMSID Pair Effective From Settlement Date</p> <p>The AMSID Pair Effective To Settlement Date</p> <p>Indicator of how to use the MSID/AMSID Pair in Settlement i.e. whether to apply Asset Differencing This information could be done in conjunction with the information required to register the Asset Metering System for the Asset Meter Register (See BR2).</p> <p>VLP should send this information to SVAA at least 5 WD prior to the Effective from Date of the AMSID Pair.</p> <p>Please note that at any point in time only two VLPs can allocate a given AMSID Pair to their Secondary BM Unit. One VLP to use the AMSID Pair data in full, whereas the other VLP only in cases where an Asset Differencing solution is required.</p>
P375-BR17	<p>SVAA must notify 'Asset Metering System Registrant' where the differencing is applied.</p> <p><u>Requirement Description</u></p> <p>Where a VLP that is not the 'Asset Metering System Registrant' allocated an AMSID Pair to their Secondary BM Unit for Asset Differencing, then the VLP who acts as an 'Asset Metering System</p>

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	<p>Registrant' must be notified. SVAA must issue the notification within 1WD since successful allocation of the differencing AMSID Pair to the Secondary BM Unit.</p> <p>Where a VLP allocates to its Secondary BM Unit an AMSID Pair for which it is the 'Asset Metering System Registrant', then SVAA will not issue a notification.</p>
P375-BR18	<p>VLP must register all affected Boundary Point MSID Pair(s) with SVAA when registering AMSID Pairs. These are known as Associated MSID Pairs</p> <p><u>Requirement Description</u></p> <p>Where a VLP decides to use an Asset Metering System to participate in Balancing Services, in addition to registering a new AMSID Pair, a VLP must also register a Boundary MSID Pair in the SVA Metering System Register'. For avoidance of doubt, AMSID Pair will not be allocated to a Secondary BM Unit if the associated Boundary Point MSID Pairs are not registered in the SVA Metering System Register'.</p> <p>To register the MSID Pair the VLP will have provide the following details:</p> <ul style="list-style-type: none"> The Secondary BM Unit Id The GSP Group Id; The MSID of the Import Metering System The MSID of the Export Metering System (where applicable) The MSID Pair Effective From Settlement Date The MSID Pair Effective To Settlement Date <p>For avoidance of doubt, where there is more than one VLP operating Assets located 'behind' a given Boundary Point Metering System, each VLP will have to register the same Associated MSID Pair against its AMSID Pair. This will not act as a change of ownership. (see BR?)</p>
P375-BR19	<p>SVAA must validate AMSID Pair registration.</p> <p><u>Requirement Description</u></p> <p>Within 1 WD of receiving all required AMSID Pair registration details the SVAA must check that the registration is complete and valid. SVAA may liaise with the VLP that submitted the registration to seek additional information, corrections or a resubmission of the registration.</p> <p>The completeness of the registration will be validated against the defined flow format published in the Code Subsidiary Document on ELEXON website. For avoidance of doubt, if, following any liaison between SVAA and the VLP, any information is missing, SVAA will reject the registration and notify the VLP by email or other electronic means of its reason.</p> <p>If, following any liaison between SVAA and the VLP, SVAA believes the registration to be invalid, then SVAA will reject the registration and notify the VLP by email or other electronic means of its reason.</p> <p>SVAA should use information contained within its own database or in external databases (e.g. SVAA may use, but is not limited to, ECOES, Ofgem's Public Register and Companies House) to check the completeness, accuracy and validity of a registration.</p> <p>SVAA could check:</p> <ul style="list-style-type: none"> Whether the AMSID in the request exists. That the Associated MSID(s) in the registration are 'live' (not disconnected).

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	<p>That the Boundary Point MSID(s) are not already registered within a SBMU (see BR22) Half Hourly Data Collector is BSC Qualified and the appointment is effective before the AMSID Pair is live within the SBMU. Meter Operator Agent is BSC Qualified AMSID is already registered against a different VLP.</p> <p>Please note that SVAA should not be limited to the above checks and could deploy a different check where appropriate.</p>
P375-BR20	<p>SVAA must notify VLP(s) upon reviewing AMSID Pair registration.</p> <p><u>Requirement Description</u></p> <p>After reviewing AMSID registration, within the same Working Day SVAA will issue notification to the VLP.</p> <p>Where the registration was successful, SVAA will confirm that AMSID Pair is now registered and can be used for provision of Balancing Services as of 'Effective from Date'.</p> <p>At the same time, SVAA will check whether Boundary Point MSID Pairs linked to that AMSID Pair are registered in 'SVA Metering System Register' for provision of Balancing Services in line with P344. A VLP cannot allocate an AMSID to their SBMU if an Associated MSID Pair is already being used for Balancing Services and has not being selected for Asset Differencing. If another AMSID pair is allocated behind a MSID Pair being used for Asset Differencing then all Parties will be notified when the AMSID is allocated</p> <p>Where the registration was unsuccessful, SVAA will provide the rationale in the notification issued to the VLP.</p>
P375-BR21	<p>VLPs must notify SVAA upon the change of VLP for an Asset.</p> <p><u>Requirement Description</u></p> <p>Virtual Lead Parties must notify SVAA upon change of ownership of Asset Metering System at least 5WDs prior to the Effective from Date of the AMSID Pair.</p> <p>SVAA should perform the same validation as for a registration of a new AMSID Pair (see BR20).</p> <p>Where the validation proved successful, SVAA will amend its records within both Asset Meter Central Register (to indicate the change of Asset Metering Registrant) and 'SVA Metering System Register (to indicate that the Pair should be aggregated under another Secondary BM Unit)'.</p>
P375-BR22	<p>SVAA must notify new and previous VLP of an AMSID Pair re-allocation.</p> <p><u>Requirement Description</u></p> <p>Where an AMSID Pair is re-allocated to a different VLP, the SVAA upon successful validation and amendment of records (in line with BR23), must issue a notification to the new VLP and the VLP that lost the AMSID Pair within the same Working Day as the amendment of records.</p>
P375-BR23	<p>VLP losing AMSID Pair must be able to raise an AMSID dispute.</p> <p><u>Requirement Description</u></p>

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	<p>Where a losing Party believes that the transfer of AMSID Pair occurred in an error, they should follow the MSID Dispute process outlined in BSCP602.</p> <p>The losing Party will have SWD since the SVAA notification was issued to raise such a dispute.</p>
P375-BR24	<p>VLP must be able to de-register AMSID.</p> <p><u>Requirement Description</u></p> <p>Where a VLP wishes to stop using an AMSID Pair for Balancing Services and effectively de-register the AMSID Pair, the VLP must use a defined data flow published in the Code Subsidiary Document on ELEXON website and submit it to SVAA.</p>
<p><u>Registering BP MSID Pairs that are affected by and Asset</u></p> <p>SVAA shall include details of BP MSID Pairs associated with the AMSID Pairs in the SVA Metering System Register</p>	
P375-BR25	<p>SVAA must differentiate between different uses of MSID Pairs.</p> <p><u>Requirement Description</u></p> <p>Within the 'SVA Metering System Register' SVAA must be distinguish between the MSID Pairs that a VLP uses for the Balancing Services purposes (P344) and the MSID Pairs that are registered by multiple VLPs (P375) for Asset Metering.</p> <p>We propose introduction of an indicator to the 'SVA Metering System Register' to allow the differentiation.</p> <ul style="list-style-type: none"> • "T" – True. MSID Pair Metered volumes are to be included in the Secondary BM Unit. This is the P344 option. • "A" – Asset Meter. MSID Pair Metered Volumes are not to be included in the Secondary BM Unit. This is the P375 option. The VLP will still be notifying Delivered Volumes for the MSID Pair (when a P375 asset behind the BP MSID Pair delivers a volume). • "D" – Differencing. MSID Pair Metered Volumes are to be included in the Secondary BM Unit (but with some specific AMSIDS netted off – these represent Plant and Apparatus not in the Secondary BM Unit). <p>Please note that the above list is <u>just a proposal</u>. We will finalise the solution architecture during the implementation phase.</p>
P375-BR26	<p>SVAA must approve the update to 'SVA Metering System Register'.</p> <p><u>Requirement Description</u></p> <p>Where the validation was successful for a given AMSID Pair, then the SVAA must confirm changes to the 'SVA Metering System Register' made by the VLP, (i.e. addition of Boundary Point MSID Pair(s)) linked to that AMSID Pair (see BR19).</p>
P375-BR27	<p>SVAA must instruct HHDA of the affected Boundary Point MSID Pair(s).</p> <p><u>Requirement Description</u></p> <p>Once the SVAA confirms the update to the 'SVA Metering System Register' with the Boundary Point MSID Pair(s) for the approved AMSID Pair(s), the SVAA will have to instruct HHDA to</p>

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	provide data for the Boundary Point MSID Pair in line with provisions of BSCP503 ⁶ as this data is necessary when allocating Delivered Volumes.
<u>Submission of metered data by HHDCs</u>	
HHDCs shall submit to SVAA metered data for AMSIDs to which they are appointed.	
P375-BR28	<p>HHDC must send Metered Volume data to SVAA. This will be the equivalent of SMMC which HHDC's send to HHDA's for Boundary MSIDs.</p> <p><u>Requirement Description</u></p> <p>Within three Working Days after a given Settlement Day (i.e. in time for Interim Information Volume Allocation Run), the Half Hour Data Collector must produce and send 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.</p> <p>The following information must be submitted:</p> <p>Asset Metering System Identifier (AMSID)</p> <p>Metered Consumption in kWh (per Settlement Period)</p> <p>Measurement Quantity Id</p> <p>Actual/Estimated Indicator</p> <p>Settlement Date</p> <p>Settlement Period Id</p> <p>The data flow including these data items will be defined in the Code Subsidiary Documents together with the process that should be followed when submitting the data.</p>
<u>Aggregation of AMSID metered volumes</u>	
Where a VLP has registered an AMSID in a Secondary BM Unit, SVAA shall include the metered volumes provided by the HHDC in the calculation of Secondary BM Unit Demand Volume (applying Line Loss Factors and GSP Group Correction Factors as appropriate).	
P375-BR29	SVAA must determine the LLFC Id for Metered Data using the connection voltages registered in the AMR
P375-BR30	<p>SVAA must determine CCC Id for Metered Data.</p> <p><u>Requirement Description</u></p> <p>Metered Data for Asset MSIDs submitted by HHDC will not have been allocated to a CCC. SVAA will need to allocate, based on:</p> <p>Whether the Asset MSID is Import or Export</p> <p>Whether the Asset Meter reading is Actual or Estimated</p>

⁶ BSCP503 – Half Hourly Data Aggregation for SVA Metering Systems Registered in SMRS

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	Measurement Class registered by the VLP
P375-BR31	<p>SVAA must categorise Metered Volume data sent by HHDC into Secondary BM Unit's Metering System Metered Consumption.</p> <p><u>Requirement Description</u></p> <p>For each AMSID, SVAA will use the Metered Volume data provided by HHDC, as well as LLFC and CCC Id to group the Metered Volume data into Secondary BM Unit's Metering System Metered Consumption.</p> <p>This will be an equivalent of Secondary BM Unit's Metering System Metered Consumption, 'AVMMC_{HZaNLKji}'⁷, that is currently provided by HHDA's for P344 Boundary Point MSIDs. For avoidance of doubt, the Secondary BM Unit's Metering System Metered Consumption calculated for AMSID Metered Data should have exactly the same format, as the 'AVMMC_{HZaNLKji}' provided by HHDA for MSID Metered Data.</p> <p>The exact definition of this AMSID version of Secondary BM Unit's Metering System Metered Consumption will be defined as part of the implementation (we propose the following draft notation 'AVMMC_{HNLKji}').</p>
P375-BR32	<p>SVAA must transform Secondary BM Unit's Metering System Metered Consumption into Metering System Metered Consumption.</p> <p><u>Requirement Description</u></p> <p>SVAA must amend the units of Metered Volume data it received from HHDC from kWh to MWh. This is an equivalent of 'VMC_{HZaNLKji}'⁸.</p>
P375-BR33	<p>SVAA must group Metering System Metered Consumption by Secondary BM Unit.</p> <p><u>Requirement Description</u></p> <p>SVAA must calculate Secondary BM Unit Metered Consumption ('VBMMC_{i2aNLKji}') by grouping Metering System Metered Consumption ('VMC_{HZaNLKji}') by the Secondary BM Unit in line with the information provided by the VLP in the SVA Metering System Register.</p>
P375-BR34	<p>SVAA must calculate losses for each Secondary BM Unit's Metering System Metered Consumption.</p> <p><u>Requirement Description</u></p> <p>SVAA must calculate losses for each Metered Volume data ('VLOSS_{i2KNij}') by applying Line Loss Factors to the Secondary BM Unit Metered Consumption ('VBMMC_{i2aNLKji}'). Note that the Line Loss Factor Class relates to the connection voltage of the AMSID (see BR), and the calculated losses therefore adjust the meter reading from the Asset Meter to the boundary of the Transmission System.</p>
P375-BR35	<p>SVAA must determine the Secondary Half Hourly Consumption.</p> <p><u>Requirement Description</u></p> <p>SVAA must sum Secondary BM Unit Metered Consumption ('VBMMC_{i2aNLKji}') derived from data provided by HHDA's and HHDC's for each MSID and AMSID registered against a given Secondary</p>

⁷ BSC Section S Annex S-2: Supplier Volume Allocation Rules paragraph 3.9.2.

⁸ BSC Section S Annex S-2: Supplier Volume Allocation Rules paragraph 7.1.1B.

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	<p>BM Unit in the SVA Metering System Register. This should be done per Secondary BM Unit, Settlement Period and Consumption Component Class basis ('V_{2Nij}').</p> <p>For purpose of P375, when aggregating Secondary BM Unit Metered Consumption, SVAA must identify instances where Asset Differencing needs to be applied based on the information provided in the SVA Metering System Register. The Secondary Half Hourly Consumption should become:</p> <p>The sum of HHDA's Secondary BM Unit Metered Consumption for BP MSID Pairs registered for purposes of P344 or P375 differencing (but not for standard P375 purposes), i.e. Secondary BM Unit MSID Pair Indicator of 'T' or 'D' (bit not 'A'); plus</p> <p>The sum of HHDC's VBMMC for AMSID Pairs registered for non-differencing purposes; minus</p> <p>The sum of HHDC's VBMMC for AMSID Pairs registered for differencing purposes.</p> <p>Detailed calculation will be outlined as a part of legal text preparation before P375 solution is finalised and approved.</p> <p>Please see Scenario 14 for more detail.</p>
P375-BR36	<p>SVAA must aggregate losses to a Secondary BM Unit level.</p> <p><u>Requirement Description</u></p> <p>SVAA must calculate losses for each Secondary BM Unit ('VLOSS_{2KNij}') by summing all Metered Volume data ('VLOSS_{2KNij}') belonging to that BM Unit for a given Settlement Day and Settlement Period.</p> <p>For purpose of P375, when aggregating Metered Volume data ('VLOSS_{2KNij}'), SVAA must identify instances where differencing needs to be applied based on the information provided in the SVA Metering System Register. The Secondary Half Hourly Consumption (Losses) should become:</p> <p>The sum of losses derived from HHDA's Metered Volume data ('VLOSS_{2KNij}') for BP MSID Pairs registered for purposes of P344 or P375 differencing (but not for standard P375 purposes), i.e. Secondary BM Unit MSID Pair Indicator of 'T' or 'D' (bit not 'A'); plus</p> <p>The sum of losses derived from HHDC's Metered Volume data ('VLOSS_{2KNij}') for AMSID Pairs registered for non-differencing purposes; minus</p> <p>The sum of losses derived from HHDC's Metered Volume data ('VLOSS_{2KNij}') for AMSID Pairs registered for differencing purposes.</p> <p>Detailed calculation will be outlined as a part of legal text preparation before P375 solution is finalised and approved.</p>
P375-BR37	<p>SVAA must adjust Metered Volume data by GSP Group Correction Factor.</p> <p><u>Requirement Description</u></p> <p>The SVAA shall adjust Half Hourly metered volume data for GSP Group Correction (thus deriving Secondary Corrected Component, 'VCORC_{2Nij}') using the GSP Group Correction Factor and GSP Group Correction Scaling Weight calculated by the SVAA for each MSID and AMSID.</p>
P375-BR38	<p>SVAA must aggregate Metered Volume data up to Secondary BM Unit level (calculate Secondary BM Unit Demand Volume).</p> <p><u>Requirement Description</u></p>

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	As part of each SVA aggregation Run, SVAA shall aggregate the Line Loss and GSP Group Correction Factor adjusted metered data. For avoidance of doubt, the aggregation should include the AMSID Pair related data submitted for P375 purposes, as well as MSID Pair related data submitted for P344 related purposes. Both should feed into calculation of Secondary BM Unit Demand Volume ('VBMUDV _{12j} ') in MWh for each Secondary BM Unit. Once calculated, SVAA should report the Secondary BM Unit Demand Volume data to the Settlement Administration Agent (SAA).
P375-BR39	SVAA must check that it received all Metered Data as expected. <u>Requirement Description</u> When aggregating metered data sent by HHDC 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 ⁹ 3.2 A.3.
<u>AMSID Delivered Volumes</u> The Lead Party of a Secondary BM Unit shall notify Delivered Volumes to SVAA (identifying both the AMSID Pair and BP MSID Pair to which they relate).	
P375-BR40	VLP must provide SVAA with Delivered Volume data. <u>Requirement Description</u> The Lead Party of a Secondary BM Unit to which an RR Activation was issued shall provide to SVAA by Settlement Day + 1 WD a data file identifying the delivered MWh volumes for each AMSID Pair associated with the Secondary BM Unit that was instructed to deliver RR Activation. The data to be provided by the Virtual Lead Party: Import AMSID Export AMSID (where applicable) Import MSID Export MSID (where applicable) Settlement Date Settlement Period Delivered volume (in MWh, where a positive value represents an increase in output and a negative volume represents a decrease in output) This is an expanded version of MSID Pair Delivered Volume, 'MPDV _j ¹⁰ '. We propose a draft description is 'AMPDV _j ', which will be finalised as a part of implementation stage. Where there is more than one Associated MSID Pairs for an AMSID, VLPs must indicate against which MSID Pair to assign the Delivered Volumes

⁹ BSCP508 – Supplier Volume Allocation Agent

¹⁰ BSC Section S Annex S-2: Supplier Volume Allocation Rules paragraph 3.10.1.

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Aggregation of AMSID Delivered Volumes

SVAA shall AMSID Delivered Volumes in the calculation of Secondary BM Unit Demand Volume (applying Line Loss Factors and GSP Group Correction Factors as appropriate).

P375-BR41	<p>SVAA must check that it received all Delivered Volume data as expected.</p> <p><u>Requirement Description</u></p> <p>The SVAA shall be required to resolve instances where there is a failure or delay in receiving required data from the Lead Party of Secondary BM unit and shall:</p> <p>Contact the responsible Party upon non-delivery to request the subsequent forwarding of the missing data set.</p> <p>If all attempts to acquire the missing data are unsuccessful then the SVAA will deem zeroes for that Settlement Run.</p> <p>To enable the SVAA to identify when Half Hourly Delivered Volumes are expected the SVAA shall load and store an data flow from the SAA detailing for each Settlement Day where the SAA has processed Replacement Reserve Activation Data for a Secondary BM Unit.</p>
P375-BR42	<p>SVAA must validate AMSIDs within Delivered Volume data sent by VLPs.</p> <p><u>Requirement Description</u></p> <p>The SVAA shall check the SVA Metering System Register and validate that AMSIDs included in the data received from Lead Parties of Secondary BM Units are included (on that Settlement Date) in a Secondary BM Unit for which the Lead Party is responsible (and report an exception if not).</p>
P375-BR43	<p>SVAA must adjust AMSID Delivered Volumes for losses between AMS and BP MS.</p> <p><u>Requirement Description</u></p> <p>Prior to allocating Delivered Volumes between AMSIDs, SVAA should adjust Delivered Volumes submitted by the VLP for the losses occurring between BP MSID Pair and AMSID Pair (thus converting 'AMPDV_j' into 'MPDV_j'). The Adjustment should follow the principle:</p> $MPDV_j = AMPDV_j * \frac{LLF_{AMSID}}{LLF_{MSID}}$ <p>Where:</p> <p>'Delivered Volume' ('MPDV_j' equivalent) is a Volume for a given Settlement Period in a given Settlement Day.</p> <p>'AMPDV_j' are the Delivered Volumes provided for AMSIDs for a given Settlement Period in a given Settlement Day.</p> <p>LLF_{AMSID}* is Line Loss Factor for a given Settlement Period in a given Settlement Day based on LLFC allocated to AMSID.</p> <p>LLF_{MSID}* is a Line Loss Factor for a given Settlement Period in a given Settlement Day based on LLFC allocated to a MSID.</p> <p>* - Please note that these are not the legal notations and the subscripts are only for illustrative purposes.</p>
P375-BR44	<p>SVAA will allocate Delivered Volumes at a given Boundary Point MSID Pair between the Import MSID and Export MSID.</p>

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	<p><u>Requirement Description</u></p> <p>SVAA will use the disaggregated kWh metered data (prior to adjustment for line losses (BR46) and GSP Group Correction Factor (BR47)) provided by HHDCs to allocate the AMSID Pair Delivered Volume to the component MSID Pairs affected by that AMSID Pair for each Settlement Period, creating the Metering System Delivered Volume ('QVMD_{Kj}') equivalent. The impact of P375 on this process is that there may now be multiple VLPs notifying values of 'MPDV_j' for a single Boundary MSID Pair. This is handled by allocating the total net value of 'MPDV_j' between the Import and Export MSIDs, and then sharing out the result between the VLPs (in proportion to their 'MPDV_j' values).</p> <p>High-level steps of allocation:</p> <ol style="list-style-type: none"> SVAA will identify Metered Volume data for a given Settlement Day, Settlement Period for a given Boundary Point MSID Pair. SVAA will sum (net Export off Import) all Delivered Volumes for a given Settlement Day, Settlement Period and Boundary Point MSID Pair reported by VLPs. SVAA will allocate the net Delivered Volume to the Boundary Point MSIDs within a given Boundary Point MSID Pair based on Metered Volume data. SVAA will allocate the net Delivered Volume to each affected Secondary BM Unit based on proportion of total Delivered Volume (see Scenario 12) for a given MSID Pair. For avoidance of doubt the affected Secondary BM Units are: <ol style="list-style-type: none"> a Secondary BM Unit that consists of that MSID Pair (in accordance with the SVA Metering System Register) and; a Secondary BM Unit that consists of an AMSID Pair (in accordance with SVA Metering System Register) which affects the Boundary Point MSID Pair in question.
P375-BR45	<p>SVAA must determine the Secondary Half Hourly Delivered (Non Losses).</p> <p><u>Requirement Description</u></p> <p>SVAA must sum Secondary BM Unit Metered Consumption ('QVBMD_{i2NLKji}') derived from data provided by HHDA and HHDCs for each MSID and AMSID registered against a given Secondary BM Unit in the SVA Metering System Register. This should be done per Secondary BM Unit, Settlement Period and Consumption Component Class basis ('VD_{i2NKji}').</p>
P375-BR46	<p>SVAA must calculate losses for each Allocated Delivered Volume.</p> <p><u>Requirement Description</u></p> <p>SVAA must calculate losses for each Allocated Delivered Volume data ('VDLOSS_{i2KNij}') by applying Line Loss Factors to the Secondary BM Unit Delivered Volume ('QVBMD_{i2NLKji}').</p>
P375-BR47	<p>SVAA must adjust Allocated Delivered Volume data by GSP Group Correction Factor.</p> <p><u>Requirement Description</u></p> <p>The SVAA shall adjust Half Hourly Delivered Volume data for GSP Group Correction (thus deriving Secondary Corrected Component, 'VCORDC_{i2NKji}') using the GSP Group Correction Factor and GSP Group Correction Scaling Weight calculated by the SVAA for each MSID and AMSID.</p>

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<u>SVAA Reporting</u>	
SVAA shall provide reports to VLPs and Suppliers	
P375-BR48	<p>SVAA should provide VLP with loss adjusted Metered Volumes.</p> <p><u>Requirement Description</u></p> <p>Upon adjustment of the for Line Losses ('VLOSS_{IZKNIJ}', the SVAA shall provide the Lead Party of a Secondary BM Unit the relevant Half Hourly Metered Volumes for each metering system registered to that Secondary BM Unit as per the 'SVA Metering System Register.</p> <p>The SVAA shall be able to provide this data in a .csv format. For avoidance of doubt, a single report per a Virtual Lead Party should be produced collating all MSID Pair and AMSID Pair related data.</p>
<u>Verification of asset independence</u>	
SVAA will perform statistical monitoring to identify AMSIDs that may not be acting independently of the other assets on-site, which may trigger other appropriate Performance Assurance Techniques.	
P375-BR49	Once AMSID Pair becomes live and starts operating, SVAA could (as required) review (from time to time) the Asset registration evidence as a part of its assurance activities.
P375-BR50	<p>SVAA must perform statistical analysis to check whether the Asset Metering Systems measure metered data of Assets that are independent.</p> <p>Statistical analysis and the associated process shall be defined in the Code Subsidiary Documents.</p>
P375-BR51	Upon request, the Virtual Lead Parties must provide SVAA with evidence that the asset is independent of other site loads.
P375-BR52	SVAA could deem Asset Meter as non-independent and therefore invalid for the purposes of P375 based on the evidence review.
<u>Performance Assurance</u>	
Settlement Risks arising from the use of AMSIDs in Settlement will be managed using the Performance Assurance Framework.	
P375-BR53	VLP should be able to raise a Trading Dispute against an Asset Metering System Metered Volumes.

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3.4 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
P375-R1	Registration	Only a Virtual Lead Party may register Asset Meter Identifiers (AMSIDs).
P375-R2	Registration	AMSID can be associated with one or more Asset Meters.
P375-R3	Registration	AMSID Pair should only be registered against a maximum of two VLPs at any point in time. One VLP can have a given AMSID Pair registered against their Secondary BM Unit (no differencing) and the second VLP can register it against their Secondary BM Unit, but only for differencing.
P375-R4	Registration	AMSID can only be associated with up to two Secondary BM Units at any point in time.
P375-R5	Registration	AMSID can only be associated with one AMSID Pair at any point in time. However, in line with Business Rule 3, AMSID Pair can exist in two records at any point in time.
P375-R6	Registration	AMSID Pair can be associated with one or more Boundary Points (i.e. one or more MSID Pairs).
P375-R7	Registration	AMSID cannot be registered against a Primary BM Unit.
P375-R8	Registration	Asset Metering System can only be registered against one AMSID Pair at any given time.
P375-R9	Registration	Only Half-hourly Metering Equipment can be used as an Asset Metering System.
P375-R10	Registration	The Export AMSID within the AMSID Pair is optional. Where an Export AMSID was provided, the 'Data Collector for Export AMSID' becomes a mandatory field.
P375-R11	Registration	A single AMSID can only be associated with either Import to or Export from an Asset.
P375-R12	Registration	Virtual Lead Party must not appoint Half Hourly Data Aggregator for AMSID.
P375-R13	Registration	Virtual Lead Party who is an 'Asset Metering System Registrant' (i.e. a VLP who register AMSID Pair to measure flows to and from an asset that they manage without the need for differencing to be applied) must complete the registration by providing information against all attributes listed on the registration form (see BR 5).
P375-R14	Registration	Within the 'SVA Metering System Register', only one VLP can have the MSID Pair allocated to their BM Unit with an Indicator of 'T' or 'D'. However, any number of VLPs can use it with an Indicator of 'A'.
P375-R15	Registration	The 'Apply Differencing' should take a BOOLEAN format. Where the value is TRUE, the AMSID Pair Metered Volumes are to be added to the Secondary BM Unit Metered Volume. Where the value is FALSE, the AMSID Pair Metered Volumes are to be subtracted from the Secondary BM Unit Metered Volumes.

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P375-R16	Aggregation and Imbalance	When registering AMSID Pairs against MSID Pairs, only one AMSID Pair can be used for differencing, i.e. all other AMSID Pairs have to have their Asset Meters installed at the Asset (measuring flows to and from the Asset).
P375-R17	Aggregation and Imbalance	When providing the Delivered Volumes to SVAA, the VLP must indicate which Boundary Point MSID Pair they used to deliver the service. For avoidance of doubt, a single Delivered Volume (in a given Settlement Day and Settlement Period) can be linked to only one MSID Pair and AMSID Pair.

3.5 Scenarios

P375 Scenario 1

The customer changes the VLP operating the Asset for which an AMSID is already registered and used for Balancing Services.

VLPs will follow the same process as for P344 Boundary Point Meters (MSID Pairs) as set out in BSCP602. The new VLP (VLP A) registers with SVAA the AMSID within its chosen SBMU. The AMSID automatically moves to the new VLP A's SBMU and is removed from the relevant SBMU belonging to the VLP (VLP B) to whom the customer previously 'belonged' too. SVAA notifies VLP B that they 'lost' the AMSID Pair. VLP B's consent is not required to enact the change. VLP B can raise a dispute where they believe that the transfer was erroneous (e.g., VLP B has a contract in place with the customer that is still in effect).

P375 Scenario 2

The new VLP appoints a new DC for an AMSID. How will the new DC know the details of the AMSID, especially when e.g. the previous VLP is not forthcoming with the data, the data is lost or the VLP goes into administration.

VLP should request the information about previous MOA for an AMSID from SVAA. SVAA upon validation shall provide required data and pass it on to the VLP. VLP will have to liaise with MOA to send the equivalent of Meter Technical Details to the VLP and Data Collector.

P375 Scenario 3

A VLP (VLP A) wants to use the Boundary Meter to provide Balancing Services. That Boundary Point Meter is already used by another VLP (VLP B) who provides Balancing Services via Asset B. However, VLP A wants to use the Boundary Meter to settle for a different customer (Asset A) from the other VLP (VLP B).

As per BSCP602, where a VLP registers an MSID Pair to their Secondary BM Unit which already belongs to a different Secondary BM Unit, then (provided that all it passes validation) a new VLP takes the MSID Pair over. However, in this scenario VLP B will be justified in wanting to keep the Boundary Meter within its own Secondary BM Unit as their customer (Asset B) has not changed hands. However, if VLP A registers MSID Pair to their Secondary BM Unit, then the MSID will move to VLP A. VLP B can raise a dispute in line with BSCP602. Where an agreement cannot be reached between the two VLPs, which want to use two different Assets via the same Boundary Point MSID Pair, one of the VLPs should be advised to install the Asset Meter.

P375 Scenario 4

The DC is unable to retrieve data from the Asset Metering System.

The process for Boundary Meters is described in BSCP601, and the same should be followed for AMSIDs. The DC could either send in a '0' value for the Metered Data at a given Settlement Period or provide an estimated value. When data is retrieved from the AMSID this can be sent to SVAA and this will be reconciled at a later Volume Allocation Runs.

P375 Scenario 5

P375 BUSINESS REQUIREMENTS

More than one Asset Meter is linked to the same Boundary Point Meter MSID Pair.

The P375 process allows associating unlimited amount of Asset Meters (in a form of AMSID Pairs) to the same Boundary Point Meter MSID Pair. Performance Assurance Framework will ensure that the Asset Meters record separate values (i.e. measuring each Asset separately) and do not record the same flows for one asset.

P375 Scenario 6

An Asset Meter is already in use on a site. There is another asset on site, which can provide Balancing Services what are my options?

- The VLP could use the Boundary Meter if it is not already in use (see scenario 1 & 3). A VLP follows processes introduced as a part of P344 to do so.
- The VLP could register a new Asset Meter for the other Asset.
- The VLP could register a new 'Asset Meter' whose flows is calculated by SVAA through a form of difference metering (net of Boundary Point Metered data and any Asset Metered Data that does not fall under a VLPs control) if no other Asset Meter uses differencing on site.

P375 Scenario 7

I cannot install an Asset Meter near to the Asset but want to use the Asset for Balancing Services. I do not want to or cannot use the Boundary Meter for various reasons.

At all times, where possible the MOA should install the physical Asset Meter at the location of the Asset.

Where such installation is not possible/practical, then the MOA can install the Asset Meter on Assets that do not provide the Balancing Service (i.e. measuring the 'leftover' Metered Data). In such instance, the AMSID would be registered for the Asset providing the Balancing Service on site, however SVAA will have to apply 'metering by difference' to derive the Metered Data for the Asset.

P375 Scenario 8

The Asset Meter records the Metered Data for the Balancing Service but there is no corresponding change in flows recorded at the Boundary Point Meter.

The Boundary records Metered Data flows for the whole site. If there is a change in the flow in the opposite direction from the Balancing Service, this will offset the expected result (e.g., where Balancing Service was to increase rate of Export, but the other Assets on site increased rate of Import at the same time). Prior to P375, this may have resulted in non-delivery charges. P375 alleviates that problem. However, where the Boundary Point Meter does not record the deviation based on the Balancing Service on a regular basis this may trigger further checks to be made such as line diagrams or site visits to ensure that the asset is truly independent from other assets on site.

P375 Scenario 9

As a VLP, I have some sites, where I would like to use the Boundary Point Meter, and some sites where I would like to use the Asset Meter. Do I need to create separate SBMU's, as this may causes problems in meeting the current minimum threshold of 1MW for Balancing Services?

The SBMU can contain a mix of sites whose Metered Data are derived from the Boundary Point Meter and or Asset Meters. The VLP does not need to create a new SBMU, which houses just AMSIDs. However, a VLP cannot choose to register both Boundary Point MSID Pair and AMSID Pair to measure the same Asset.

P375 Scenario 10

I now use AMSIDs within my SBMU. How will this affect my FPN?

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The Metered Data collected by the DC will not be loss adjusted. SVAA will allocate Line Loss Factor Class as a part of the AMSID registration process. The Line Loss Factor Class for a given AMSID will be of the voltage level connection of the Asset (which may be different to the Boundary Point MSID LLFC).

DC will send the 'raw' Metered Data to SVAA and the SVAA will apply the Line Loss Factors to adjust for losses to GSP level.

The FPN submitted to NGESO should be adjusted so that it relates to flows at the GSP level. Therefore, VLP should make adjustments for line losses. Inaccuracies in the FPN may lead to non-delivery/imbalance charges. The Grid Code expects FPNs to be as accurate as possible.

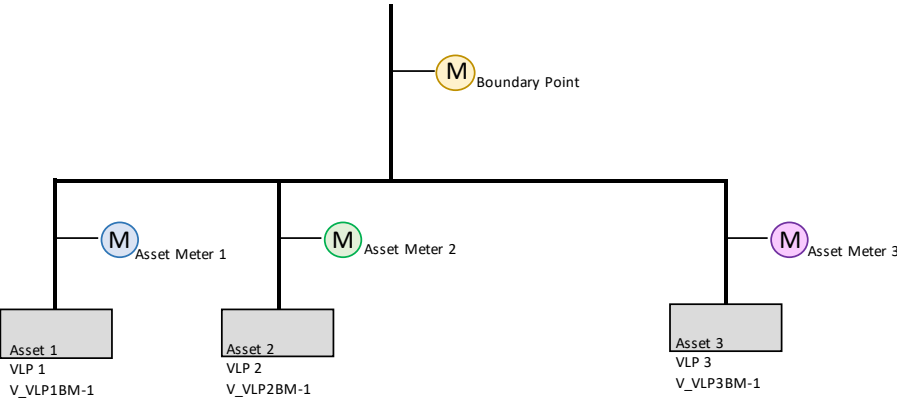
P375 Scenario 11

I previously used difference metering for my AMSID but a meter on site has been removed meaning that this is now not possible.

Where this happens then it is not possible to continue using difference metering for that site unless MOA (under VLPs instruction) installs another Asset meter. The Boundary Meter can be used for settlement if it is not already used by another VLP.


P375 Scenario 12

Multiple VLPs use a given Boundary Point to respond to instructions. What will happen with Delivered Volumes allocation?



In the above scenario, there are three Assets on a network behind a single Boundary Point. A 'Supplier X' supplies the Boundary Point (and, as a result all the assets beneath it) with electricity. No BSC Party uses the Boundary Point to provide the Balancing Services. Each of the Assets behind the Boundary Point is managed by a different VLP.

HHDA provided SVAA with the following Metered Volume data for a given Boundary Point MSID Pair on a Settlement Day and Settlement Period.

 Boundary Point Import MSID: 1 MWh and Export MSID: 3 MWh

Three VLPs have notified Delivered Volumes.

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- M

Asset Meter 1

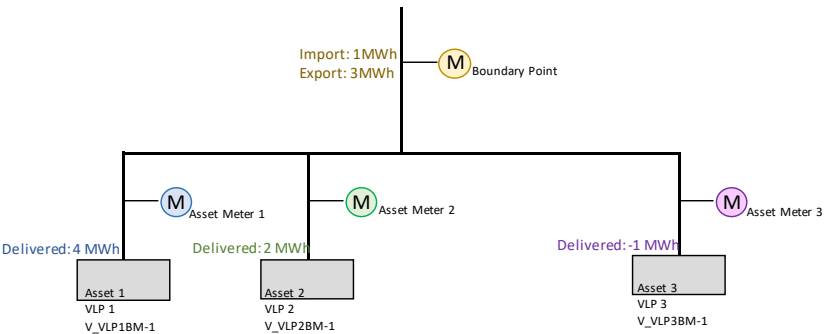
VLP1 = 4 MWh
- M

Asset Meter 2

VLP2 = 2 MWh
- M

Asset Meter 3

VLP3 = -1 MWh.



SVAA will first allocate the total net of all Delivered Volumes provided for a given Boundary Point MSID Pair. In this case, the total net Delivered Volume is 5 MWh (4+2+ (-1)). Those 5 MWh, would be allocated in line with the current provisions of the BSC¹¹.

1. Check whether Delivered Volume is non-negative (value of zero or above) or negative (less than zero).
2. Where the value is non-negative (in our scenario 5MWh), start with an Export MSID within the Boundary Point MSID Pair.
3. Compare the Delivered Volume (5MWh) against the Metered Volume for the Export MSID (3MWh).
4. Allocate the minimum value of the two to the Export MSID (3MWh).
5. Allocate the difference to the Import MSID within the MSID Pair (5MWh – 3 MWh = 2MWh).

Once the net volume is allocated between MSIDs within Boundary Point MSID Pair, the SVAA will allocate the volumes at each MSID between the VLPs proportionately. The table below illustrates:

VLP	Delivered Volume	Proportion of Total	Import Volume	Export Volume
VLP1	4 MWh	80%	2 * 0.8 = 1.6 MW	3 * 0.8 = 2.4 MWh
VLP2	2 MWh	40%	2 * 0.4 = 0.8 MWh	3 * 0.4 = 1.2 MWh

¹¹ BSC Section S Annex S-2: Supplier Volume Allocation Rules paragraph 3.10

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VLP3	-1 MWh	-20%	$2 * -0.2 = -0.4 \text{ MWh}$	$3 * 0.2 = -0.6 \text{ MWh}$
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Scenario 13

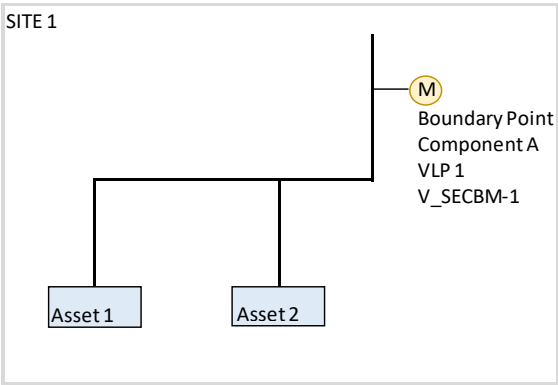
The customer no longer wishes to use an Asset for Balancing Services. As a VLP what should I do?

Where an Asset will no longer be participating in the Balancing Services, the VLP will be able to notify SVAA about AMSID Pair de-registration. VLP should highlight the reason for de-registering the AMSID (e.g. decommissioning of plant). SVAA will amend its records to reflect that.

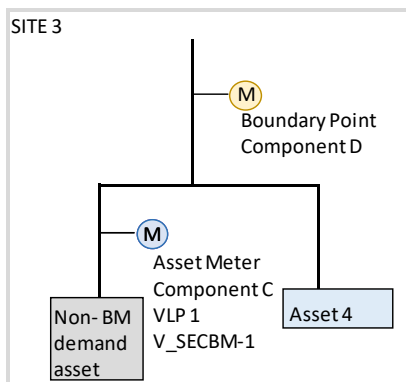
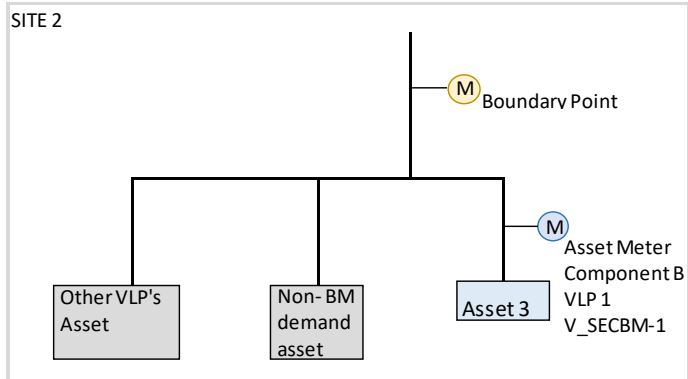
Scenario 14

How will SVAA aggregate Metered Data and apply differencing for a Secondary BM Unit?

When aggregating Metered Data from multiple MSID Pairs and AMSID Pairs up to a Secondary BM Unit level, SVAA will have to sum data from multiple sources. Let a Secondary BM Unit 'V_SECBM-1' be composed of one BP MSID Pair (Component A) located at a site 1, AMSID Pair (Component B) located at a site 2 and AMSID Pair located at a site 3. The AMSID Pair on site 3 is registered for differencing (Component C) against BP MSID Pair (Component D; for avoidance of doubt this would be a different BP MSID Pair to the Component A). The scenario is represented in the following set of graphics.



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HHDA will provide SVAA with Metered Volume Data for Component A and Component D in line with SVAA Settlement Calendar.

HHDC will provide SVAA with Metered Volume Data for Components B and C three working days after a given Settlement Day.

SVAA will initiate aggregation activity in line with SVAA Settlement Calendar.

1. First SVAA will determine CCC Id to the Metered Data received from HHDCs (BR31).
2. Then it will determine the Volume Allocation Run for that data (BR32).
3. Then it will assign the LLFC, CCC Id, Secondary BM Unit and the Primary BM Unit that is affected (the Primary BM Unit of a Supplier supplying the BP MSID Pair) to each Metered Data for each Settlement Period and Settlement Date (BR33).
4. SVAA will change units of each Metered Data from KWh to MWh (BR34).
5. It will group the Metered Data (MWh) into 'pots' by LLFC, CCC Id, Secondary BM Unit (in this case 'V_SECBM-1') and the Primary BM Unit that is affected.

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6. It will calculate losses for each 'pot' based on the LLFC allocated to it (BR35).

7. It will then aggregate the Metered Volume data in line with the following (BR36):

$$Metered\ Data_{V_SECBM-1} = \sum Metered\ Data_{Component\ A} + \sum Metered\ Data_{Component\ B} + (\sum Metered\ Data_{Component\ D} - \sum Metered\ Data_{Component\ C})$$

4. GLOSSARY

Below table represents terms which we will introduce as a 5 Modification or which are defined outside the Balancing and Settlement Code. The terms introduced as a part of P375 will be finalised as a part of development of the legal text.

Terms, which are defined in the Balancing and Settlement Code or Code Subsidiary Documents, were omitted.

Please note that items surrounded by a square parentheses '[]' **are yet to be agreed/further defined**.

Term	Meaning/Proposed Meaning
Asset Meter Central Register (ACMR)	means a register listing all AMSIDs which provide or provided Balancing Services.
Asset Metering Point (AMP)	means the point at which a supply to (export) or from (import) to a Boundary Point: (i) is or is intended to be measured; or (ii) where metering equipment has been removed, was or was intended to be measured; or, where in each case such measurement is for the purposes of ascertaining the Virtual Lead Party's Settlement liabilities under the Code.
Asset Metering System (AMS)	means a Metering Equipment that measures Exports or Imports at an Asset Metering Point.
Asset Metering System Identifier (AMSID)	means a unique number relating to an Asset Metering Point. It is analogous to a SVA Metering System Number.
Balancing Service	has the meaning given to that in the Transmission Licence.
Boundary Point	means a point at which any Plant or Apparatus not forming part of the Total System is connected to the Total System
Boundary Point Metering System	means a Metering System which measures Exports or Imports at a Boundary Point
Connection Voltage	voltage at which the Asset connects to the private network
delivery capacity	a measure of Asset's maximum Import and Export capacity expressed in MW. It is analogous to Generation Capacity for Export AMSIDs and Demand Capacity for Import AMSIDs.
Meter Operator Agent (MOA) Alternative	means an agent appointed by a Virtual Lead Party in accordance with [Section L] to install, commission, test and maintain, and rectify faults in respect of SVA Asset Metering Equipment which falls under the category of Asset Metering Types 4 and 5 [below 1MW Maximum Demand for the circuit being measured by an Asset Meter]. Each VLP (as a Performance Assurance Party) is responsible for ensuring that the Meter Operator Agent Alternative.
Metering Point	means the point, determined according to the principles and guidance given at schedule 8 of the Master Registration Agreement, at which a supply to (export) or from (import) a Distribution System: (i) is or is intended to be measured; or

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	(ii) where metering equipment has been removed, was or was intended to be measured; or (iii) in the case of an Unmetered Supply, is deemed to be measured, where in each case such measurement is for the purposes of ascertaining the Supplier's Settlement liabilities under the Code.
Metering System	means particular commissioned Metering Equipment, subject to and in accordance with Section K1.6
Party responsible for dialling the Asset Meter	means an agent appointed by a Virtual Lead Party in accordance with [Section L] to retrieve, validate and process metering data in relation to SVA Asset Metering Equipment and passing such data to the appointed Half-Hourly Data Collector.
MSID	has the same meaning as SVA Metering System Number
Physical Notification (PN)	means, in respect of a Settlement Period and a BM Unit, a notification made by (or on behalf of) the Lead Party to the NETSO under the Grid Code as to the expected level of Export or Import, as at the Transmission System Boundary, in the absence of any Acceptances, at all times during that Settlement Period.
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;
SVA Metering System Number	means a unique number relating to a Metering Point and which consists of the following: (i) a 2 digit number determined by reference to the Licensed Distribution System Operator; (ii) a 10 digit reference number provided by the relevant Licensed Distribution System Operator; (iii) a 1 digit check number provided by the relevant Licensed Distribution System Operator.
SVA Metering System Register (previously known as SVA Metering System Balancing Services Register)	means the register established pursuant to Section S10.1.3 and BSCP507. It lists the association between Secondary BM Units and MSID Pairs and/or AMSID Pairs.

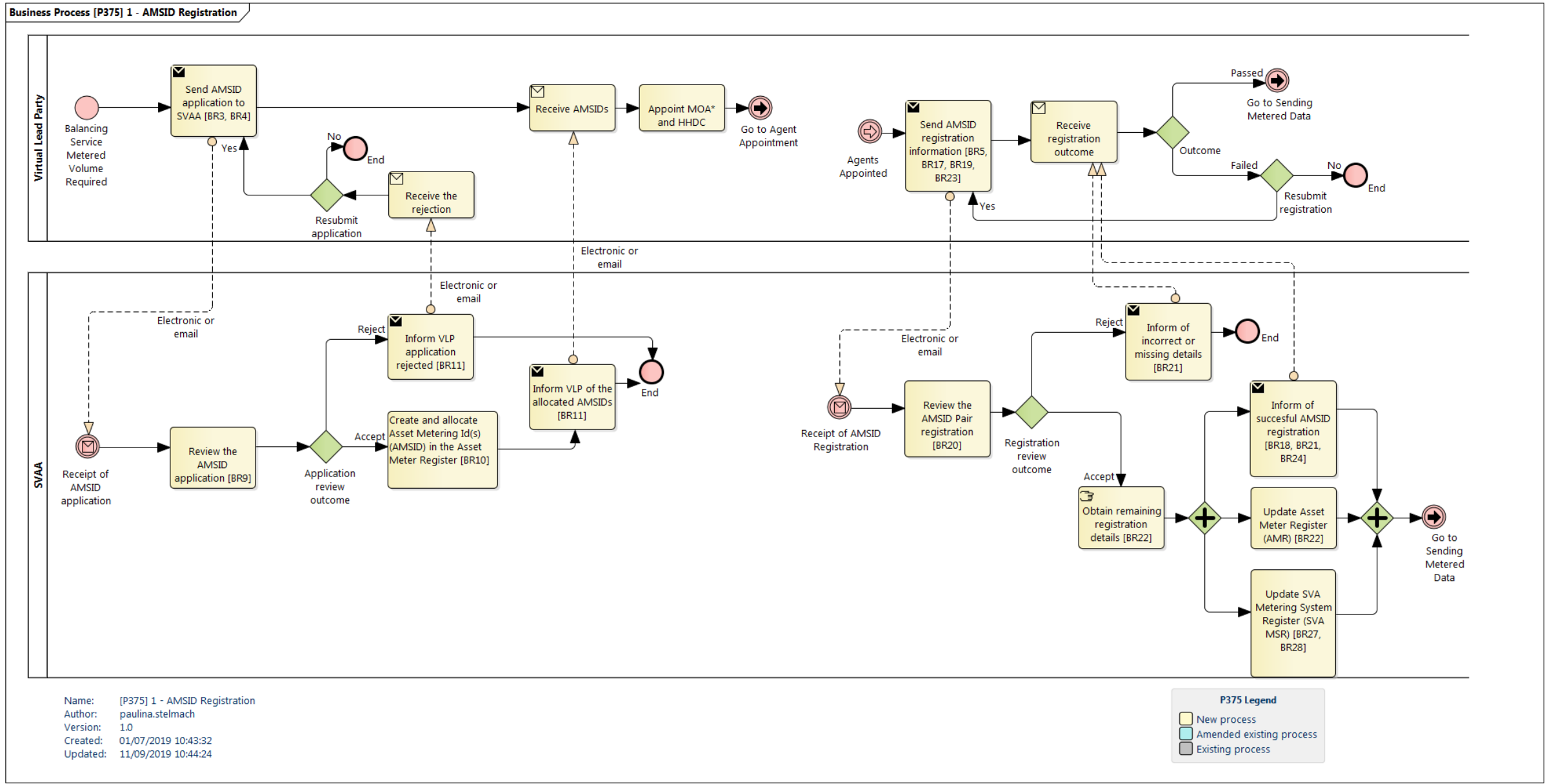
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APPENDIX A

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

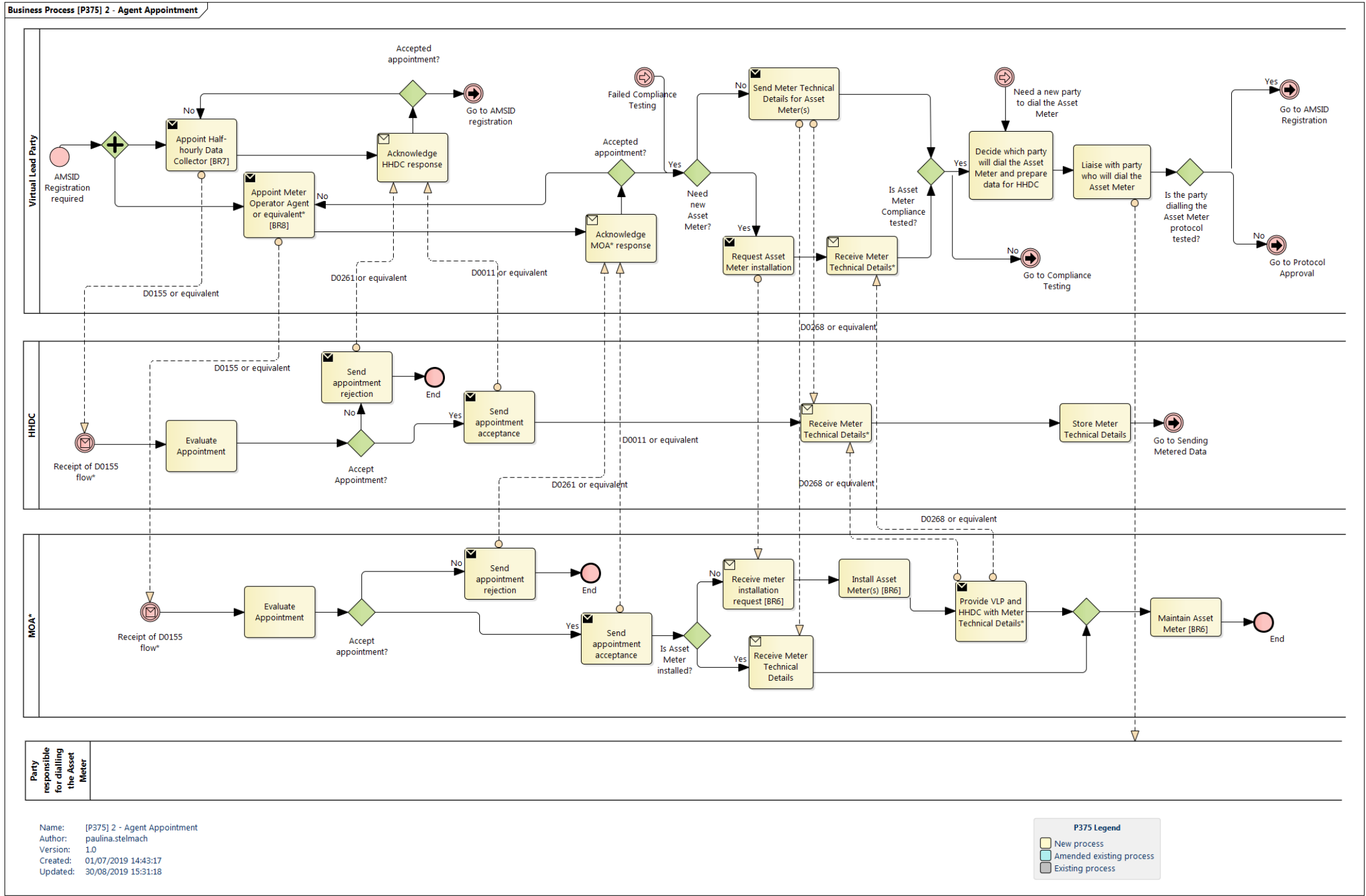
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APPENDIX B



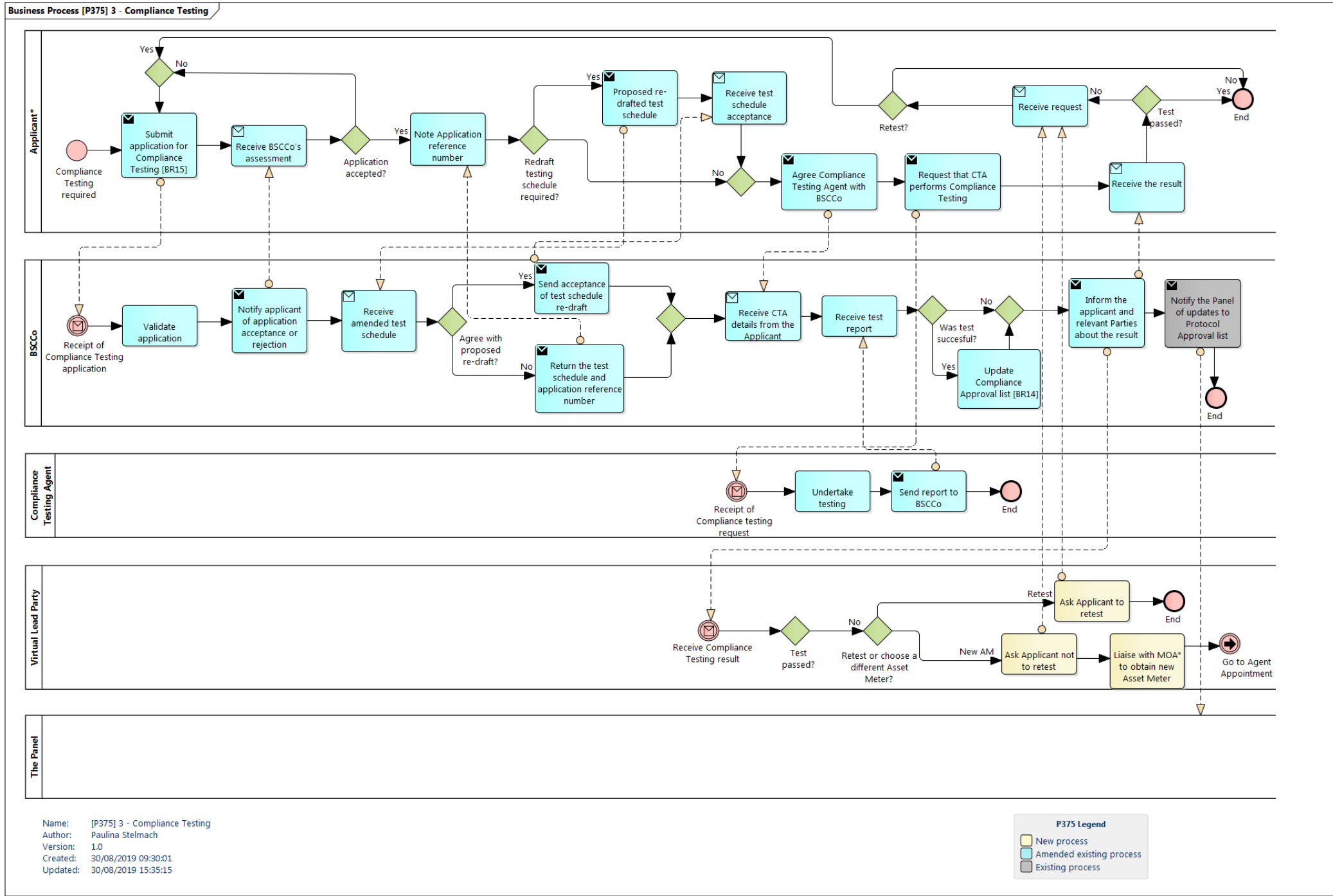
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APPENDIX C



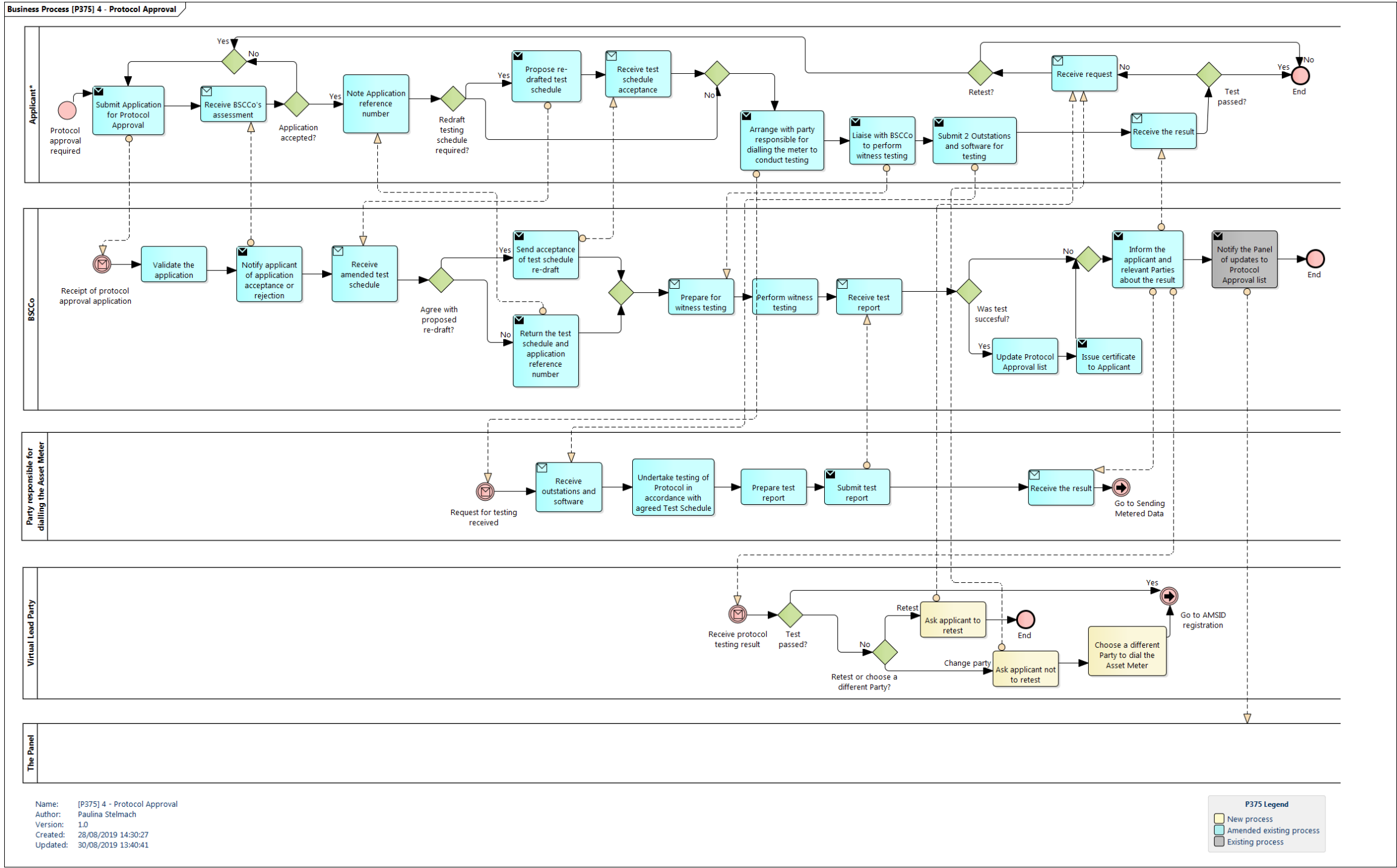
P375 BUSINESS REQUIREMENTS

APPENDIX D



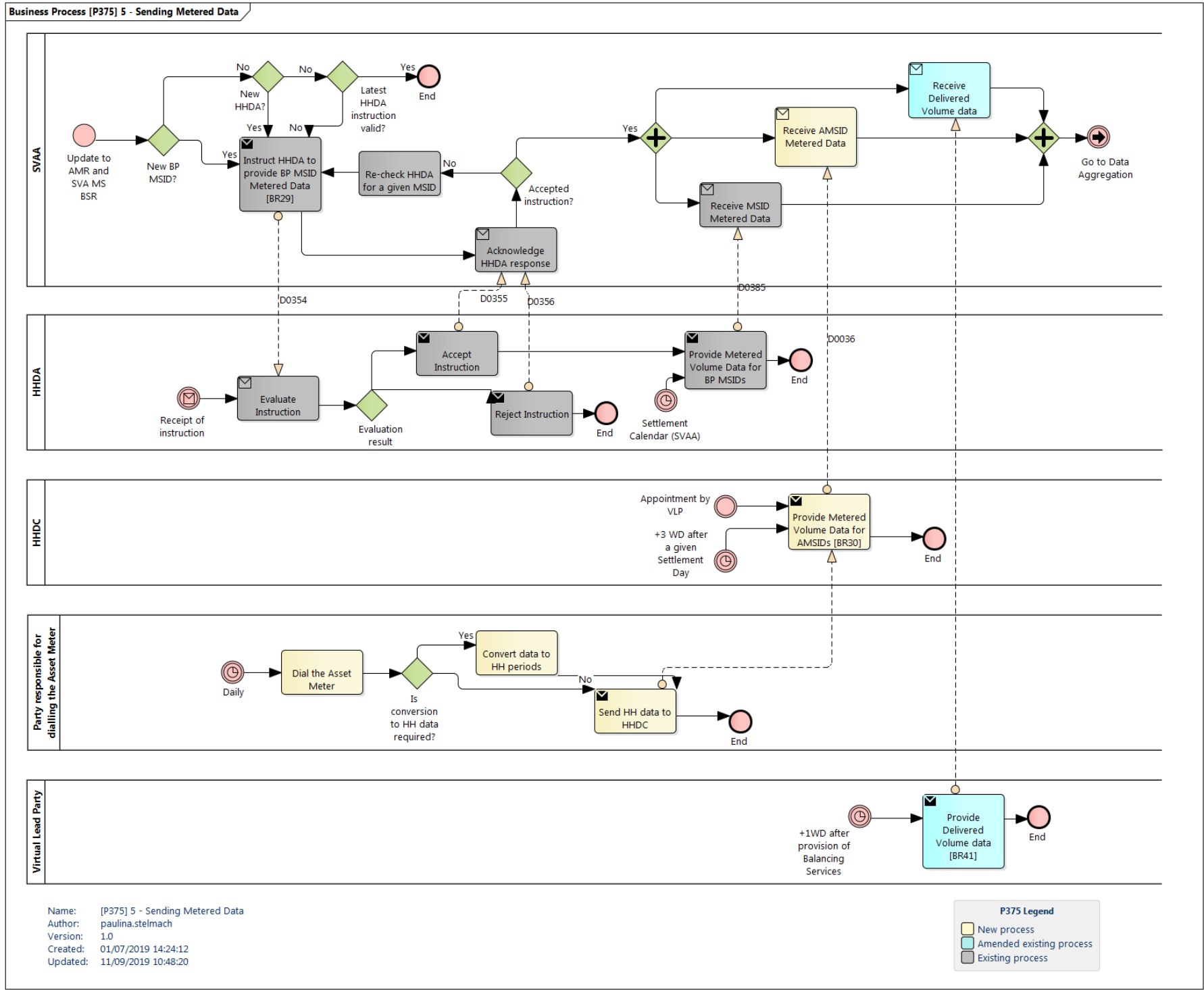
P375 BUSINESS REQUIREMENTS

APPENDIX E



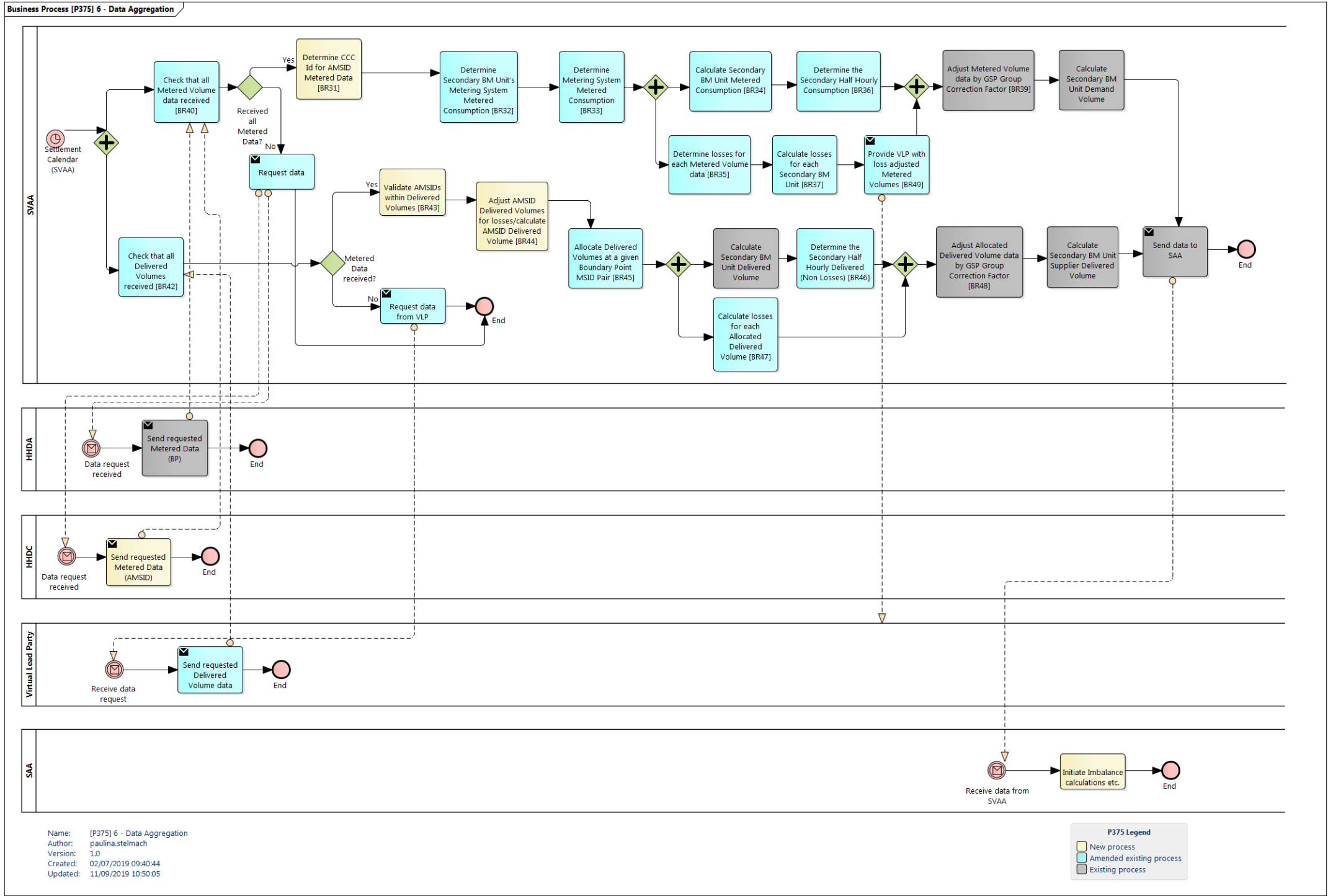
P375 BUSINESS REQUIREMENTS

APPENDIX F



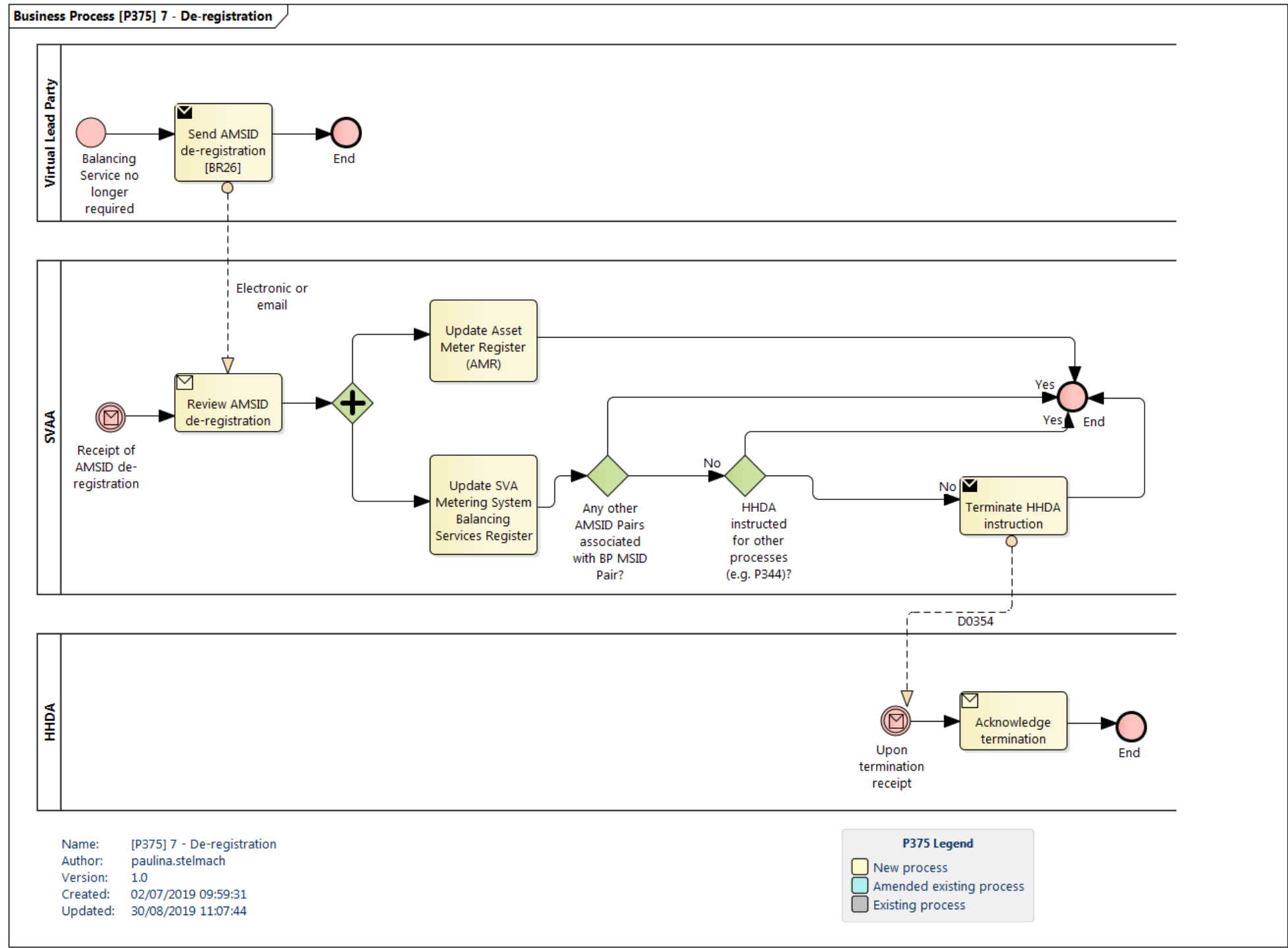
P375 BUSINESS REQUIREMENTS

APPENDIX G



P375 BUSINESS REQUIREMENTS

APPENDIX H



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APPENDIX I

