

CP Assessment Report

CP1484 'Introduction of Additional SVAA Validation at SVA Run time'

ELEXON



Committee

Supplier Volume Allocation Group

Recommendation

Approve

Implementation Date

2 November 2017
(November 2017 Release)



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About This Document

This document is the Change Proposal (CP) Assessment Report for CP1484 which ELEXON will present to the Supplier Volume Allocation Group (SVG) at its meeting on 2 May 2017. The SVG will consider the proposed solution and the responses received to the CP Consultation before making a recommendation to the Panel on whether to approve CP1484.

There are six parts to this document:

- This is the main document. It provides details of the solution, impacts, costs, and proposed implementation approach. It also summarises the SVG's initial views on the proposed changes and the views of respondents to the CP Consultation.
- Attachments A-D contain the proposed redlined changes to deliver the CP1484 solution.
- Attachment E contains the full responses received to the CP Consultation.

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1 Why Change?



What is the current process?

A Supplier Volume Allocation (SVA) Run allocates the quantities of Active Energy volumes to Supplier Balancing Mechanism (BM) Units. The SVA Run involves aggregation across Data Aggregator (DA) files and profiling of Non Half Hourly (NHH) volumes. The BM Unit data is then used in Settlement to determine how much each Supplier's imbalance volume is. It is therefore important that the data entering the SVA Agent (SVAA) Run is accurate.

Currently the SVAA operator checks whether all the expected data files have been received from the DAs. SVAA also checks for duplication of data. In the cases where duplication is found or data is incomplete, then this is addressed by respectively removing the duplicated data or defaulting values where it is missing.

Lastly the SVAA checks for variances in Grid Supply Point (GSP) Group Correction Factors (GCFs). Where these are above a threshold of ten or less than zero the SVA Run will fail and an exception report will be created. The threshold is set at these limits to identify when erroneous data is at a significant level.

What is the issue?

Each year there are on average two to three Trading Disputes caused by erroneous data used in SVA Runs. The materiality of the average Trading Dispute is approximately £600k with some being five to ten times larger and the average resolution taking four months. The issue is caused by erroneous data entering the SVAA Run and not being adequately identified by the current validation checks. Currently there are no assessments of the energy volumes or Metering System Identifier (MSID) counts within the DA files by the SVAA. Some of the errors entering the SVA Run could be detected by introducing these additional assessments.

There are situations where the SVAA operator is aware of erroneous data but cannot get the DA to submit valid data in time for the SVA Run. In these situations, the SVAA operator needs the ability to default data as appropriate. However this is not currently possible. This is because the SVAA operator requires intervention by another SVAA system administrator to delete duplicate or erroneous data files before defaulting can occur. The result is that the erroneous data is used which introduces errors into Settlement and may cause Trading Disputes.

The exception reports created when variances in GCFs are above a threshold are not adequate. This is because the thresholds are not realistic and do not identify erroneous data when they should.

Furthermore, exceptions caused by GCF validation do not always lead to the SVA Run being stopped. This can result in files being sent to Suppliers with known erroneous data. In the cases when the SVA Run is not automatically stopped as a result of an exception report, the SVAA operator is not able to manually stop the run and address the issues. This results in SVA Runs being inaccurate and can lead to Trading Disputes where there is clearly an issue with the input consumption data.

Grid Supply Point

This is the Systems Connection Point at which the Transmission System is connected to a Distribution System.



GSP Group Correction

GSP Group Correction is a process that ensures the total energy allocated to Suppliers in each Settlement Period in each GSP Group matches the energy entering the GSP Groups from the Transmission System, adjoining GSP Groups and through embedded generation. GSP GCFs are used to adjust the volumes up or down so that they match.

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Proposed solution

ELEXON raised [CP1484 'Introduction of Additional SVAA Validation at SVA Run time'](#) on 8 February 2017. The CP proposes that three new validation processes, outlined below, are implemented. The change is designed to improve validation before, during and after a Volume Allocation Run (VAR).

1: Validate an individual DA data flow

This validation process aims to capture erroneous data in submitted DA files prior to the VAR. Initially, the DA will send the files of consumption data for each GSP Group to the SVAA. The SVAA will be modified so it can automatically validate data to ensure it is suitable for use in Settlement. These validation checks will assess the plausibility of consumption values by comparing against appropriate recent data files from the same DA and should identify any major errors or discrepancies.

When the data changes are outside tolerances the SVAA must notify the DA who will reassess the validity of the data files, address any issues and re-submit to the SVAA prior to SVAA run time. This will reduce the likelihood of the SVA operator having to default the data. Instead SVAA will use the revised and more accurate DA file(s).

2: Ensure there is a complete set of DA data ready for the VAR

Currently SVAA checks that all expected DA files for a VAR have been received. This is known as the data marshalling process.

CP1484 proposes a new process that will set out the steps for one GSP Group for a specific Settlement Day and Settlement Run and will give the SVAA operator the ability to default data more easily than is currently possible.

However, it is recognised that the SVAA operator will need to carry out the process for all GSP Groups and for several different Settlement Runs within the same time window on a given Business Day. Although this is similar to the existing data marshalling process, it gives the SVAA operator the ability to default data, when identified as erroneous, without support from SVAA system administrators in two new ways:

- Substituting default data when required (manually); and
- Substituting default data when required (automatically).

Please note that the SVAA operator will need to get permission from ELEXON to default data as is the current working practice. However, this change will improve the efficiency of the data marshalling process. This process will follow the quarantining of the suspect file identified in process one above. It is intended to make the defaulting process easier for the SVAA operator than is currently possible.



Data marshalling process

The data marshalling process ensures that all files for a VAR have been received or defaulted as appropriate.

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3: Carry out the VAR and check results

Following a VAR, aggregate consumption information is available for each GSP Group. This makes it possible to perform additional checks on the results of a VAR to identify whether the results are plausible. This process summarises the steps required for a GSP Group for a given Settlement Day and Run. This is then repeated for every GSP Group.

This solution focuses on the checks made on the out-turn data and the results. It does not change the actual volume allocation calculations. Two additional checks are proposed:

- Checks on volumes to be corrected in each GSP Group and Settlement Period. The checks will provide an exception report of any volumes outside defined tolerances; and
- Checks on each GSP GCF per Settlement Period. The checks will provide an exception report of any volumes outside defined tolerances.

Where a tolerance has been breached the SVA Run will be aborted while a further investigation is undertaken by the SVAA operator. Data issues identified will be addressed before the run is re-initiated. An override facility will be provided where data issues cannot be identified in a timely manner.

These checks highlight to the SVAA operator that following the checks carried out in processes one and two, there are still issues that need to be resolved. The exception report and data will be provided to ELEXON for investigation where the SVAA operator cannot resolve at run-time. ELEXON will attempt to resolve any issues by first trying to get the original data from the DA and if this is not possible by defaulting the data before the next Reconciliation Run.

The expectation is that this process will be infrequent following the implementation of processes one and two and is intended to trap any residual issues that need to be addressed.

Update tolerances for SVA Run

The parameters for the tolerances will also be updated before implementation of this CP to ensure they are accurate. ELEXON will analyse recent GCF values and Half Hourly (HH) and NHH consumption volumes to identify acceptable ranges within which correct values should lie. During the testing phase of the implementation of this CP, the parameters will be refined. Finally, they will be reviewed at least annual basis and updated when necessary.

The analysis to determine the tolerance levels will be conducted following the approval of this CP. The intention is for ELEXON to monitor the levels and have the flexibility to change them quickly if required. Hence we are not proposing these values to be defined BSC parameters requiring committee approval.

Proposer's rationale

Significant error in data quality impacts all Parties and gives rise to Trading Disputes. Some errors can cause financial hardship to smaller participants if they cannot be resolved in a timely manner. These changes are intended to trap, replace or default erroneous data in a more efficient manner than is currently possible.

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For example, had CP1484 been in place the recent incident¹ involving missing data from a single NHHDA would have been detected and default data could have been more easily utilised.

Proposed redlining

Attachments A-D contain the proposed changes to [Balancing and Settlement Code Procedure \(BSCP\) 503](#), [BSCP508](#), the [SVA Data Catalogue Volume 1](#) and the [SVAA User Requirements Specification \(URS\)](#) to deliver CP1484.

Please note that BSCP508 and the SVAA URS set out the new processes for the SVAA to validate at SVA run time. BSCP503 and the SVA Data Catalogue Volume 1 are being included to update them so they align to current practice. There are no anticipated impacts or costs to central systems as a result of updating BSCP503 or the Data Catalogue Volume 1.

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¹ See ELEXON Circular EL02640: <https://www.elexon.co.uk/news-events/elexon-circulars/>

3 Impacts and Costs

Central impacts and costs

Central impacts

CP1484 will require changes to BSCP503, BSCP508, the SVA Data Catalogue Volume 1, the SVAA URS and the SVAA system.

Central Impacts	
Document Impacts	System Impacts
<ul style="list-style-type: none">• BSCP503• BSCP508• SVA Data Catalogue Volume 1• SVAA URS	<ul style="list-style-type: none">• SVAA system

Central costs

The central implementation costs for CP1484 will be approximately £153,000 to implement document and system changes. This is based on a 22-week project to update the software and carry out relevant testing, which was determined in a service provider impact assessment.

In accordance with the [SVG's Terms of Reference](#), the Panel will be required to approve CP1484 as its central implementation costs are above £150,000. We are therefore presenting CP1484 to the SVG for its recommendation to the Panel.

BSC Party & Party Agent impacts and costs

Participant impacts

We previously believed only Half Hourly Data Aggregators (HHDAs) and Non Half Hourly Data Aggregators (NHHDA) would be impacted, but following the CP Consultation Suppliers have also been identified as impacted.

We received five responses to the CP1484 consultation from a mixture of Suppliers and Supplier Agents (Data Collectors (DCs), DAs and Meter Operator Agents (MOAs)). All five reported that they would be impacted by CP1484, requiring process changes. Whilst not all respondents indicated the extent to which they were impacted, three of the five respondents indicated the impact would be small or only where they were asked to investigate an error. Please see Attachment E for the full responses.

BSC Party & Party Agent Impacts	
BSC Party/Party Agent	Impact
HHDAs and NHHDA	HHDA and NHHDA processes and systems will be impacted. This includes developing processes to handle SVAA requests.

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BSC Party & Party Agent Impacts

BSC Party/Party Agent	Impact
Suppliers	Process changes will be required. One respondent reported that it expected a reduction in administrative activities as a result of reduced error correction activities.

Participant costs

Four of the five respondents to the CP Consultation highlighted that they would incur costs in implementing CP1484. Of these, three suggested costs would be minimal to low to implement and one did not indicate the magnitude of costs. Two respondents reported that there would be on-going costs but did not indicate how much these would be.

One respondent did not believe they would incur costs, rather they believed there would be some resource savings through reduced data correction activities.

4 Implementation Approach

Recommended Implementation Date

CP1484 is proposed for implementation on 2 November 2017 as part of the November 2017 Release. This aligns with the Implementation Date of [CP1478 'Automate the loading of the DF Matrix'](#) which also requires system changes to the SVAA and is the earliest Release that this CP can be included in.

Four of the five respondents agreed with the proposed implementation approach. One of these four respondents noted that the leads times were appropriate to analyse and identify GCF tolerances and test systems. They believed it was important not to rush this change due to its importance and potential impact on Settlement and Parties if it went wrong.

One respondent, who did not support the Implementation Date, believed the February 2018 Release (22 February 2018) would be more appropriate. They wanted to clarify whether there was sufficient time for ELEXON to properly implement and test the software changes. We can confirm that should CP1484 be approved by the BSC Panel on 11 May 2017, as scheduled, CP1484 can be implemented as part of the November 2017 Release.

One of the respondents highlighted, during a subsequent clarification conversation on CP1484 that they would be interested in participating in testing. We will provide an update on this at the SVG meeting on 2 May 2017.

SVG's initial views

CP1484 was presented to the SVG at its meeting on 28 February 2017 ([SVG193/07](#)).

One SVG Member commented that the CP appeared to be a positive improvement from the current baseline. However, they did have some questions about the CP itself. Firstly, an SVG Member asked what controls there would be around the SVAA operator being able to default data. ELEXON explained that the SVAA operator will need to ask it for permission to default data (as currently) and that this would be clarified in subsequent CP papers (see section two above).

Secondly, the tolerance calculations that will be modified in the third additional validation step outlined in the 'Proposed Solution' section above will be materially important to industry and so an SVG Member asked that more detail be given for consultation. ELEXON agreed to provide more details which are discussed in the solution.

6 Industry Views

This section summarises the responses received to the CP Consultation. You can find the full responses in Attachment E.

Summary of CP1484 CP Consultation Responses				
Question	Yes	No	Neutral/ No Comment	Other
Do you agree with the CP1484 proposed solution?	5	0	0	0
Do you agree that the draft redlining delivers the intent of CP1484?	4	1	0	0
Will CP1484 impact your organisation?	5	0	0	0
Will your organisation incur any costs in implementing CP1484?	4	1	0	0
Do you agree with the proposed implementation approach for CP1484?	4	1	0	0
Do you have any further comments on CP1484?	0	5	0	0

Comments on the CP

All five respondents to the CP Consultation agreed with CP1484. One respondent observed that the current GCF tolerance levels appear to be nonsensical and ineffective and therefore a review of these levels is supported.

One respondent queried whether ELEXON had considered the impact of errors caused by new connections that may lead to Trading Disputes. We have not specifically considered this, as this would still happen whether CP1484 is implemented or not. Furthermore, only errors that meet the SVAA tolerance levels would be flagged for investigation. Any smaller errors that were not identified by the SVAA validation and that could not be corrected in the next Settlement Run could be resolved via the Trading Disputes process.

Of the five respondents, two raised some points for further clarification. In particular they wanted further information on the tolerance levels that will be set and on the timescales for DAs to correct. These respondents agreed in principle with CP1484 but were concerned that it would have an adverse impact on their business caused by an increase in error investigation. We have spoken with these respondents to provide clarification and address their concerns.

We confirmed to these respondents that the intent is to set the tolerance levels at a point that would detect major errors that could significantly impact the cash-flow of smaller Parties. The process will allow ELEXON to amend the tolerance levels to ensure they are not over or under sensitive. We do not expect there to be a consistent increase in the volume of work as the errors should be large and ad-hoc.

The method for SVAA and DAs to communicate is the same as it currently is. The P0035 'Invalid Data' data flow will be used by SVAA to request DAs to investigate. The P0035 is a data flow that is manually populated and read with details of the error to investigate.

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Where DAs cannot resolve the request before the Run, we would expect the data to be defaulted and for the request to be resolved by the next Run.

The two respondents, who were concerned about the two hour resolution window for DAs, were content with having until the next Run, where they were not able to resolve within the two hour constraint. Where it is the RF or DF Run, agreement between ELEXON, SVAA and the DA would be sought on the appropriate course of action. Please see Appendix 2 for more details.

Comments on the proposed redlining

Attachments A to D contain the proposed changes to BSCP503, BSCP508, SVA Data Catalogue Volume 1 and the SVAA URS. Four out of five respondents agreed with the draft redlining. We have since spoken to the one respondent who disagreed to discuss their concerns. Their main concern was around ensuring appropriate tolerance levels are set and not specifically on the redlining itself. The tolerance levels are further discussed in section above and in appendix 2.

Additionally, we received the following specific comments on the redlining:

Comments on the CP1484 Proposed Redlining		
Document & Location	Comment	ELEXON's Response
BSCP503 3.4.2.6	Where data previously submitted is proven to be correct, what information should the HHDA send to SVAA?	The HHDA should communicate with SVAA via phone and email to confirm the outcome of its investigation. We would expect this to include the rationale and reasons why the data is valid. This should be the same process as would currently happen.
BSCP508 3.3.3	Where data previously submitted is proven to be correct, what information should the HHDA send to SVAA?	As above.
BSCP508 3.3.3	How is the SVAA expected to react should no response be received from the HHDA within the 2 hour time limit?	The SVAA will seek confirmation from ELEXON of what action to take. Either ELEXON will instruct SVAA to default the data or to use the submitted data.

7 Recommendations

We invite you to:

- **NOTE** that we will present CP1484 to the Panel for decision at its meeting on 11 May 2017;
- **RECOMMEND** that the Panel approves the proposed changes to BSCP503, BSCP508, SVA Data Catalogue Volume 1 and SVAA URS; and
- **RECOMMEND** that the Panel approves CP1484 for implementation on 2 November 2017 as part of the November 2017 Release.

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Appendix 1: Glossary & References

Acronyms

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

Acronyms	
Acronym	Definition
BM	Balancing Mechanism
BOA	Bid Offer Acceptance
BSCCo	Balancing and Settlement Code Company
BSCP	Balancing and Settlement Code Procedure
CCC	Consumption Component Classes
CP	Change Proposal
CPC	Change Proposal Circular
DA	Data Aggregator
DC	Data Collector
GCF	Group Correction Factor
GSP	Grid Supply Point
HH	Half Hourly
MOA	Meter Operator Agent
MSID	Metering System Identifier
NHH	Non Half Hourly
SVA	Supplier Volume Allocation
SVAA	Supplier Volume Allocation Agent
SVG	Supplier Volume Allocation Group
URS	User Requirement Specifications
VAR	Volume Allocation Run

DTC data flows and data items

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

DTC Data Flows and Data Items	
Number	Name
P0035 ²	Invalid Data

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² See [SVA Data Catalogue](#) for details.

External links

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

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

External Links		
Page(s)	Description	URL
3	CP1484 page on the ELEXON website	https://www.elexon.co.uk/change-proposal/cp1484/
4	BSCPs page on the ELEXON website	https://www.elexon.co.uk/bsc-related-documents/related-documents/bscps/
8	CP1478 page on the ELEXON website	https://www.elexon.co.uk/change-proposal/cp1478/
9	SVG 193 meeting page on the ELEXON website	https://www.elexon.co.uk/meeting/svg-193/?from_url=https://www.elexon.co.uk/events-calendar-item/svg-193/

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Appendix 2: Consultation Comments

The table below extracts comments from Attachment E that we believe require an ELEXON response.

Comments on CP1484 that require an ELEXON response		
No.	Comment	ELEXON Response
1.	We recognise that this change proposes a more efficient process for the SVAA, however we require to understand what it would entail as to how the affected party would be notified of any substitution performed by the SVAA Operator, not with standing assurance that the activities would be executed accurately through the auditing process.	The DAs will be notified using an existing free form data flow, the P0035 'Invalid Data'. This data flow is already used to communicate exceptions between SVAA and DAs. It is sent via email. We would expect SVAA to include details of the error that has been detected, including the impacted file. We would also expect any substitutions or actions taken by the DA to be confirmed via phone and email as appropriate.
2.	The proposal is also difficult to further gauge without the new tolerance parameter range being defined at this stage; therefore we would request further clarity to confirm in particular relative to the timelines for resolution. Once this has been provided we can make an informed assessment of the quantified impacts that would be expected, and develop internal requirements to support this process.	<p>We do not intend to perform analysis to determine the tolerance levels until the CP is approved.</p> <p>Our intention is to set the levels at a point that would detect major errors. We are mindful of how the sensitivity of the tolerance levels will impact DAs. We do not anticipate this to create regular additional work for DAs. If CP1484 is approved, the tolerance levels will be tested to find the appropriate level.</p> <p>In live operation we will be able to amend the tolerance levels if they are returning too many false positives.</p> <p>One approach discussed with the respondent was looking at a distribution curve of Settlement volumes and setting the tolerances to flag anything in the extremes of the curve</p>
3.	It is worth noting that there is a process in existence where upon the Data Collector is notified of erroneous data at MPAN level. Therefore we would question the value that adding an additional stage of validation at GSP level would provide, as the actions required for this proposal would be for the Data Aggregator to identify into specific MPANs causing the erroneous data, which the Data Aggregator would in turn require to speak with the	<p>This new SVAA validation should be in addition to any existing DA/DC validation and not instead of. The SVAA validation is designed to detect the large errors that could have a significant financial impact on smaller Parties.</p> <p>The proposal is that if an error is detected by SVAA and cannot be resolved by the DA before the Run, the data can be defaulted. This would give the DA until the next Run to investigate</p>

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Comments on CP1484 that require an ELEXON response

No.	Comment	ELEXON Response
	<p>relevant Data Collector(s) to investigate. The time available to complete this process are expected to be short, so the feasibility of this process working as intended is also questionable.</p>	<p>the error with the DC.</p>
4.	<p>It can often be the case that the errors this Change Proposal is seeking to address can be caused by the HHDA receiving erroneous data from the HHDC. Has any thought been given to including any obligations on the HHDC, in terms of aiding the investigation for example?</p>	<p>We spoke with the respondent and invited views on what these additional obligations could be. It was noted that any additional obligations for DCs would require an additional CP.</p>
5.	<p>My only concern here is that only genuine issues are identified and presented to HHDA's for analysis / correction.</p>	<p>See response to comment 2.</p>
6.	<p>In order to achieve this, any method used to determine the plausibility of data needs to take account of variations in consumption based factors such as the day of the week, public holidays, contract activity, the varying performance requirements for different measurement classes (the difference from SF to R1 is likely to be more pronounced for Measurement Class E/F/G compared to C, in fact, I don't understand why these checks only include Measurement Class C). Total MSID counts also need to cater for changes caused by contract activity; simply comparing a count for a given HHDA for 01/04 to 31/03 may result in files being un-necessarily rejected.</p>	<p>Half Hourly data from HHDA's will be compared. For a file submitted for use in the II or SF Volume Allocation Run, the comparator data will be the most recently submitted data for the most recent VAR for the previous Settlement Day with the same day type. For a file submitted for use in the R1 VAR or later, the comparator data will be the data used for the same Settlement Day for the previous VAR.</p> <p>The volumes will be compared by looking at all Consumption Component Classes (CCC) where the Consumption Component Indicator is 'C' across all Settlement Periods. This will be compared to the equivalent total from the comparator data and the difference calculated.</p>
7.	<p>This suggests either some intelligence needs to be built in to determining such thresholds, or the thresholds are fairly generous and so fail to detect genuine issues. The logic for setting a threshold should include both a percentage shift and an absolute value, I suggest.</p>	<p>We intend to include both a percentage change and an absolute value.</p>
8.	<p>Should the HHDA not be able to resolve the error within the D0040/298 within the 2 hour time limit, what action would SVAA then take? Although the HHDA would endeavour to identify and correct</p>	<p>See response to comment 3.</p>

Comments on CP1484 that require an ELEXON response

No.	Comment	ELEXON Response
	erroneous data, it may not always be possible, for the above reasons.	

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