

CP1492 'Causes and treatment of large Line Loss Factors'



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About This Document

The purpose of this Change Proposal (CP) 1492 CP Consultation is to invite BSC Parties, Party Agents and other interested parties to provide their views on the impacts and the merits of CP1492. The Imbalance Settlement Group (ISG) and Supplier Volume Group (SVG) will then consider the consultation responses before making a decision on whether or not to approve CP1492.

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 ISG and the SVG initial views on the proposed changes.
- Attachments A-D contain the proposed redlined changes to deliver the CP1492 solution.
- Attachment E contains the specific questions on which we seek your views. Please use this form to provide your response to these questions, and to record any further views or comments you wish to be considered.



What is the issue?

Line Loss Factors (LLFs) are values which are calculated and applied to Metered¹ Volumes, scaling the Metered Volumes to account for distribution losses. A LLF value greater than 1 is typical of importing sites as more energy must be dispatched than required, to account for the losses that will occur along the way. Exporting sites are normally assigned a LLF value smaller than 1. [Balancing and Settlement Code Procedure \(BSCP\) 128 'Production, Submission, Audit and Approval of Line Loss Factors'](#) lists 16 Principles to be used by Licensed Distribution System Operators (LDSOs) when calculating the LLFs that will apply for the forthcoming BSC Year. BSCP128 requires LDSOs to prepare and submit a methodology for calculating LLFs that complies with these LLF Methodology Principles.

Ahead of the implementation of new annual LLF values at the start of each Settlement Year² ELEXON is required to review submitted LLF methodologies against the 16 Principles. Following approval of the LLF calculation methodologies by the Panel, each LDSO must calculate the LLFs in accordance with the approved methodology. These calculated values are submitted to ELEXON, who conducts an audit of the calculations for approval by the Panel. The ISG and the SVG approve LLF methodologies and values for Central Volume Allocation (CVA) and Supplier Volume Allocation (SVA) respectively under delegated authority from the Panel.

At [SVG191](#) in January 2017, the SVG discussed two instances of large³ SVA LLF values submitted for BSC Year⁴ 2017/18. The SVG noted that:

- The values were calculated correctly in accordance with BSCP128 and were therefore compliant with the audit;
- The values were below the [Data Transfer Catalogue \(DTC\)](#)'s permitted maximum of 99.999 for SVA LLFs;⁵
- BSCP128 only allows defaulting of LLF values where they are found to be non-compliant when audited; and
- None of the 16 Principles in [Section 3.1 of BSCP128](#) determine if or when an LLF value should be considered too large for approval.

The SVG therefore agreed that the calculated values should be used in Settlement for 2017/18.

However, SVG Members expressed concern over whether these values were representative of the losses on the network caused by the site, noting the potential for a material impact on the customer. The SVG therefore agreed with ELEXON's suggestion to review BSCP128, via an Issue Group, to investigate the causes of large LLF values and different options for handling these under the BSC. ELEXON raised [Issue 65 'Causes and treatment of large Line Loss Factors'](#) on 19 January 2017.

The Issue Group agreed that changes to BSCP128 are required. These changes would allow alternative LLF calculation steps for sites with low consumption in a given Seasonal

How does the audit process work?

The process of the LLF Audit starts on 1 August each year, when LDSOs need to either submit their calculation methodology or (for Embedded LDSOs) confirm that they will be Mirroring the methodology of their Host LDSO.

For LDSOs that calculate LLFs a site visit is required. This part of the Audit takes place until December each year. For Embedded LDSOs that Mirror, ELEXON is required to review and approve the calculation methodologies and resulting LLFs of the relevant Host LDSO(s) first.

The process for LDSOs that Mirror takes place between January and March each year. By 10 March we have to make sure that all approved LLFs for the upcoming BSC Year are in SVA and CVA Settlement systems ready for 1 April.

For more information, please see [guidance on the BSC Website](#).

¹ It should be noted that LLFs apply equally to Unmetered Volumes too.

² Please note Line Loss Factors are Settlement Period and Settlement Day specific and do not change during different Settlement Runs.

³ 'Large', for these purposes, refers to any LLF value greater than 2.0.

⁴ The BSC Year runs from 1 April to 31 March.

⁵ The maximum value for CVA LLFs, as permitted by the NETA Interface Definition and Design, is 9.9999999.

Time of Day (SToD)⁶ period which would otherwise result in a high LLF. The Issue 65 Report was tabled at the BSC Panel Meeting on 8 June 2017 ([paper 267/04](#)) and ELEXON has raised this CP to make the necessary changes to BSCP128 and associated Appendices.

⁶ SToD distribution losses vary according to the time the power is taken by the customer. Typically there will be different LLFs for Day, Night, Summer Day and Winter Day and Winter Peak times. The SToD periods are specified in the LDSO's methodology statement. These are available via the [ELEXON Portal](#).

Proposed solution

ELEXON raised [CP1492 'Causes and treatment of large Line Loss Factors'](#) on 21 June 2017. This CP proposes to amend BSCP128 to introduce a 17th Principle. This new Principle will specifically address scenarios where low energy consumption/generation volumes for a SToD period result in a LLF value that may not be reflective of the actual losses at the site.

This 17th Principle would allow LDSOs to deploy alternative calculations specific to such instances that would not result in high LLF values.

Proposer's rationale

High value LLFs are an exception (the two cases reported above are the first encountered that are so high). However, they can occur on generation/demand sites where energy usage/export can be low for a given SToD period, but the reactive power is high. Whilst these sites are relatively rare, they are becoming more and more common with the growth of embedded generation facilities.

ELEXON presented the Issue Group with an example scenario (Attachment E to the Issue 65 Report). In this scenario an SVA site with embedded generation produced LLF values in excess of 10.000 for two winter SToD periods, due to low Active Import and high Active Import Related Reactive Power during these periods.

If consumption/generation patterns in a given SToD period change at a site with a high LLF value, there could be severe cost implications for the customer. Similarly, there could be distortive impacts on the calculation of Grid Supply Point (GSP) Group Correction Factors (GCFs), which would have an impact on Suppliers.

The Issue Group became aware during discussions that some LDSOs are already taking steps within the 16-Principle framework to correct high LLF values. However, there is a lack of consistency in how they are applied. The introduction of the 17th Principle to BSCP128 would ensure consistency, transparency and accuracy of LLF calculations across all LDSOs.

CP Consultation Question

Do you agree with the CP1492 proposed solution?

Please provide your rationale.

We invite you to give your views using the response form in Attachment E

Proposed redlining

Attachments A-D set out the proposed redlined changes to deliver the CP1492 solution.

Issue 65 Group proposed redlining

The proposed redlining attached was developed as part of Issue 65. However, there was not unanimous agreement on the wording to be used. Five Issue Group members

recommended that ELEXON raise a CP to include a 17th Principle into BSCP128 as described above.

However, one member remained neutral, believing that the proposed redlined changes could potentially complicate the audit process and undermine the existing 16 Principles with unwanted consequences. In addition, the member sent a post-meeting note asking for more clarity about what is meant by the 'default replacement process' and the 'default calculation'. The Issue Group member believed that some further work was required to bring the proposed solution to a workable process. ELEXON replied that LDSOs are expected to define the 'default calculation' in their Methodology Statements, in line with proposed Principle 17.

Proposed way ahead

The majority of the Issue Group members agreed that the proposed redlining submitted by ELEXON is suitable. Should the consultation responses indicate that there is a need for further clarification, we will investigate the best way to do this.

CP Consultation Question

Do you agree that the draft redlining delivers the CP1492 proposed solution?

If 'No', please provide your rationale.

We invite you to give your views using the response form in Attachment E

Additional CP Questions

'Default replacement process' and 'default calculation'

As outlined above, one Issue Group member raised post-meeting concerns about the meaning of 'default replacement process' and 'default calculation'. Given that ELEXON does not think that further clarification is required and that the Issue group has not had the opportunity to consider this concern, we welcome feedback on these two phrases specifically.

CP Consultation Question

Do you agree that no further clarification is required for the term 'default replacement process'?

If 'No', please provide your rationale.

We invite you to give your views using the response form in Attachment E

CP Consultation Question

Do you agree that no further clarification is required for the term 'default calculation'?

If 'No', please provide your rationale.

We invite you to give your views using the response form in Attachment E

'Large' consumption or generation volumes

The Issue Group discussed removing the word 'large' from the 17th Principle: '... for a given site contains insufficient large consumption or generation volumes...'. Four Issue 65

Workgroup members were neutral, one member wished to remove 'large' and one wished to keep it. The Issue Group members agreed to include the word 'large' in the draft redlined text.

The discussion about the inclusion of the word 'large' was based on whether or not the removal would change the meaning of the sentence.

ELEXON's view is that without the word 'large', the sentence would be 'insufficient consumption' i.e. not enough to base a calculation on. However, the inclusion of the word 'large' in this context should be taken to mean enough range of data of a suitably high volume in order to warrant a default calculation. It will be the responsibility of the LDSO to justify their interpretation of 'large' alongside their use of a 'default calculation'.

Given the amount of discussion on whether or not to include the word 'large' we feel it appropriate to specifically consult on the inclusion of the word 'large' in the revised text.

CP Consultation Question

Do you agree that the word 'large' in the redlined text is suitable? If you disagree, what would be your suggested alternative?

If 'No', please provide your rationale.

We invite you to give your views using the response form in Attachment E

The Issue Group also agreed to change BSCP128 Section 3.1 (8) to: 'As a minimum, **Generic all** LLFs shall be calculated separately for Day and Night'. This means that for each site there should be at least two LLFs as a minimum, i.e. one for day and one for night. LDSOs may calculate further LLFs such as, for example, taking account of SToD variations. It was felt by some of the Issue group that this may be outside of the Group's remit and as such requested that industry provide an opinion as to whether it is and appropriate change.

CP Consultation Question

Do you believe that changing 'Generic' to 'all' will have a material impact on LDSOs?

If 'Yes', please provide your rationale.

We invite you to give your views using the response form in Attachment E

3 Impacts and Costs

Central impacts and costs

Central impacts

CP1492 will require changes to BSCP128 and three of its Appendixes (Appendices 1, 3 and 10). In addition, ELEXON will need to update its LLF audit processes and LLF guidance document to reflect the addition of the new Principle.

Central Impacts	
Document Impacts	System Impacts
<ul style="list-style-type: none">• BSCP128• BSCP128 Appendix 1• BSCP128 Appendix 3• BSCP128 Appendix 10• LLF Guidance	<ul style="list-style-type: none">• None

Central costs

The central implementation costs for CP1492 will be approximately £1,680 (seven ELEXON working days) to implement the relevant document changes. The breakdown of cost is as follows:

- One day to implement changes to BSCP128 and Appendixes; and
- Six days to review and implement changes to ELEXON's LLF Audit process and LLF Guidance Note.

Once implemented, there will be no additional ongoing impacts or costs for ELEXON. Assessing 'default processes' will form part of the business as usual activity when reviewing LDSOs submissions each year in line with BSCP128. This will result in a minor increase in workload, but not sufficient enough to have a noticeable impact.

BSC Party & Party Agent impacts and costs

Participant impacts

CP1492 will require LDSOs to update their LLF calculation methodologies to include the 17th Principle when calculating LLFs for future BSC Years. Should the LDSO wish to use a 'default process' to prevent from calculating large LLFs, then the changes in calculation of Site Specific LLFs may be required, thus impacting current tools used by LDSOs.

No other BSC Parties or Party Agents are expected to be impacted but we seek confirmation of this through this CP Consultation.

BSC Party & Party Agent Impacts	
BSC Party/Party Agent	Impact
Distributors (LDSOs)	Implementation of 17 th Principle when determining LLFs.

CP Consultation Questions

Will CP1492 impact your organisation?

If 'Yes', please provide a description of the impact(s) on your organisation and any activities which you will need to undertake between the approval of CP1492 and the CP1492 Implementation Date (including any necessary changes to your systems, documents and processes). Where applicable, please state which of the roles that you operate as will be impacted and any differences in the impacts between each role. We also invite you to provide an estimate of the effort (total personnel days) and duration needed to implement. Please indicate if you would like this to be kept confidential.

Will your organisation incur any costs in implementing CP1492?

If 'Yes', please provide details of these costs, how they arise and whether they are one-off or on-going costs.

We invite you to give your views using the response form in Attachment E

4 Implementation Approach

Recommended Implementation Date

CP1492 is proposed for implementation on **22 February 2018** as part of the February 2018 Release.

The February 2018 Release is the next available Release that can include this CP.

CP Consultation Question

Do you agree with the proposed implementation approach for CP1492?

Please provide your rationale.

We invite you to give your views using the response form in Attachment E

ISG's initial views

The ISG considered CP1492 at its meeting on 25 July 2017 ([196/02](#)).

An ISG Member noted within the CP Progression Paper it stated that LDSOs were expected to provide the alternative calculations in their methodology statement, and asked if this was an overall calculation that would fit every LDSO or each LDSO creating their own. ELEXON responded that each DNO would be expected to provide their own within the Methodology statements.

An ISG Member asked for clarification on what the reporting LDSOs would have to do on this calculation. ELEXON noted that LDSOs would highlight each instance where the calculation had been applied.

An ISG Member asked why this was being rushed into the February 2018 release, when it wouldn't be ready in time for the 2018-2019 LLF Audit. ELEXON noted that the February release was a proposed release date and could be rethought if further issues were raised during the consultation, however, LDSOs will start working on the 2019-2020 Methodologies in March 2018, so a February 2018 release would be ideal.

SVG's initial views

The SVG considered CP1492 at its meeting on 1 August 2017 ([198/02](#)).

The SVG offered no comments on CP1492.

Appendix 1: Glossary & References

Acronyms

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

Acronyms	
Acronym	Definition
BM	Balancing Mechanism
BSC	Balancing and Settlement Code
BSCP	Balancing and Settlement Code Procedure
CMRS	Central Volume Allocation Meter Registration System
CP	Change Proposal
CVA	Central Volume Allocation
DTC	Data Transfer Catalogue
GCF	Group Correction Factor
GSP	Grid Supply Point
ISG	Imbalance Settlement Group
LDSO	Licensed Distribution System Operator
LLFs	Line Loss Factors
LWI	Local Working Instruction
SMRS	Supplier Volume Allocation Meter Registration System
SToD	Seasonal Time of Day
SVA	Supplier Volume Allocation
SVG	Supplier Volume Allocation Group

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
2	BSC Panel 8 June 2017 Summary	https://www.elexon.co.uk/meeting/bsc-panel-266/?from_url=https://www.elexon.co.uk/events-calendar-item/bsc-panel-266/
2	BSCPs page on the ELEXON website	https://www.elexon.co.uk/bsc-related-documents/related-documents/bscps/
2	Data Transfer Catalogue on Master Registration Agreement Service Company website	https://dtc.mrasco.com/Default.aspx

External Links		
Page(s)	Description	URL
2	ELEXON Portal	https://www.elexonportal.co.uk/
2	Guidance on LLF submission, audit and approval	https://www.elexon.co.uk/bsc-related-documents/bsc-guidance-notes/
2	Issue 65 page on ELEXON website	https://www.elexon.co.uk/smg-issue/issue-65/
2	SVG191 summary	https://www.elexon.co.uk/meeting/svg-191-2/?from_url=https://www.elexon.co.uk/events-calendar-item/svg-191/
3	CP1492 page on the ELEXON website	https://www.elexon.co.uk/change-proposal/cp1492/
10	ISG196	https://www.elexon.co.uk/meeting/isg-196/
10	SVG198	https://www.elexon.co.uk/meeting/svg-198/