

# CP Progression Paper

## CP1492 'Causes and treatment of large Line Loss Factors'

**ELEXON**



---

### Committee

Imbalance Settlement  
Group



---

### Contact

**Chris Wood**

020 7380 4142

[chris.wood@elexon.co.uk](mailto:chris.wood@elexon.co.uk)



### Contents

<b>1</b>	<b>Why Change?</b>	<b>2</b>
<b>2</b>	<b>Solution</b>	<b>3</b>
<b>3</b>	<b>Impacts and Costs</b>	<b>4</b>
<b>4</b>	<b>Implementation Approach</b>	<b>6</b>
<b>5</b>	<b>Proposed Progression</b>	<b>7</b>
<b>6</b>	<b>Recommendations</b>	<b>9</b>
	<b>Appendix 1: Glossary &amp; References</b>	<b>10</b>

### About This Document

This document provides information on new Change Proposal (CP) 1492 and outlines our proposed progression timetable for this change, including when it will be issued for CP Consultation in the next suitable Change Proposal Circular (CPC) batch.

We are presenting this paper to capture any comments or questions from the Imbalance Settlement Group (ISG) and the Supplier Volume Allocation Group (SVG) Members on this CP before we issue it for consultation.

There are six parts to this document:

- This is the main document. It provides a summary of the solution, impacts, anticipated costs, and proposed implementation approach, as well as our proposed progression approach for this CP.
- Attachment A contains the CP1492 proposal form.
- Attachments B-E contain the proposed redlined changes to deliver the CP1492 solution.

---

ISG196/xx

CP1492  
CP Progression Paper

---

17 July 2017

---

Version 1.0

---

Page 1 of 11

---

© ELEXON Limited 2017

# 1 Why Change?

## What is the issue?

Line Loss Factors (LLFs) are values which are calculated and applied to Metered 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 in Settlement on 1 April, 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 high<sup>1</sup> SVA LLF values submitted for BSC Year<sup>2</sup> 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;<sup>3</sup>
- 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](#).

ISG196/xx

CP1492

CP Progression Paper

17 July 2017

Version 1.0

Page 2 of 11

© ELEXON Limited 2017

<sup>1</sup> 'High', for these purposes, refers to any LLF value greater than 2.0.

<sup>2</sup> The BSC Year runs from 1 April to 31 March.

<sup>3</sup> The maximum value for CVA LLFs, as permitted by the NETA Interface Definition and Design, is 9.9999999.

Time of Day (SToD)<sup>4</sup> 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.

## 2 Solution

### 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 17<sup>th</sup> Principle. This new Principle will specifically address scenarios where low energy consumption/generation volumes for a SToD period result in an LLF value that may not be reflective of the actual losses at the site.

This 17<sup>th</sup> 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. 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 17<sup>th</sup> Principle to BSCP128 would ensure consistency, transparency and accuracy of LLF calculations across all LDSOs.

### Proposed redlining

Attachments B-D set out the proposed redlined changes to deliver the CP1490 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

<sup>4</sup> 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](#).

recommended that ELEXON raise a CP to include a 17<sup>th</sup> 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 believes that some further work is 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 is suitable. Should the consultation responses indicate that there is a need for further clarification, we will investigate the best way to do this.

## 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 Local Working Instructions (LWIs) for audit specifications to reflect the addition of a new Principle.

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

#### 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;
- Three days to implement and review changes to the LLF Audit LWI; and
- Three days to implement and review changes to the LLF Guidance Note.

ISG196/xx

CP1492

CP Progression Paper

17 July 2017

Version 1.0

Page 4 of 11

© ELEXON Limited 2017

## BSC Party & Party Agent impacts and costs

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

CP1492 will require LDSOs to update their LLF calculation methodologies to include the 17<sup>th</sup> Principle when calculating LLFs for future BSC Years.

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

## 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.

## 5 Proposed Progression

### Progression timetable

The table below outlines the proposed progression plan for CP1492. BSCP128 is jointly owned by the ISG and SVG. Accordingly this CP will be presented to both Committees for information and for decision:

Progression Timetable	
Event	Date
CP Progression Paper presented to ISG for information	25 Jul 17
CP Progression Paper presented to SVG for information	1 Aug 17
CP Consultation	7 Aug 17 – 1 Sep 17
CP Assessment Report presented to ISG for decision	26 Sep 17
CP Assessment Report presented to SVG for decision	3 Oct 17
Proposed Implementation Date	22 Feb 18 (Feb 18 Release)

### CP Consultation questions

In addition to the standard CP Consultation questions for CP1492, we intend to ask four additional questions as outlined below.

Standard CP Consultation Questions
Do you agree with the CP1492 proposed solution?
Do you agree that the draft redlining delivers the CP1492 proposed solution?
Will CP1492 impact your organisation?
Will your organisation incur any costs in implementing CP1492?
Do you agree with the proposed implementation approach for CP1492?

As outlined in Section 2, 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 intend to consult on these two phrases specifically. As such, we intend to ask the following two additional consultation questions:

Additional CP Consultation Questions
Do you agree that no further clarification is required for the term 'default replacement process'?
Do you agree that no further clarification is required for the term 'default calculation'?

The Issue Group also discussed removing the word 'large' from the 17<sup>th</sup> 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

ISG196/xx

CP1492  
CP Progression Paper

17 July 2017

Version 1.0

Page 7 of 11

© ELEXON Limited 2017

redlined text. Given the amount of discussion on whether or not to include the word 'large' we feel it appropriate to specifically consult on the inclusion. We therefore intend to add the following additional question to the CP Consultation:

#### Additional CP Consultation Questions

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

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. The Issue Group suggested adding the following extra consultation question:

#### Additional CP Consultation Questions

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



## 6 Recommendations

We invite you to:

- **NOTE** that CP1492 has been raised;
- **NOTE** the proposed progression timetable for CP1492;
- **PROVIDE** any comments or additional questions for inclusion in the CP Consultation; and
- **NOTE** that we will also present CP1492 to the SVG for initial comment on 1 August 2017.

## 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
CPC	Change Proposal Circular
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	<a href="https://www.elexon.co.uk/meeting/bsc-panel-266/?from_url=https://www.elexon.co.uk/events-calendar-item/bsc-panel-266/">https://www.elexon.co.uk/meeting/bsc-panel-266/?from_url=https://www.elexon.co.uk/events-calendar-item/bsc-panel-266/</a>
2	BSCPs page on the ELEXON website	<a href="https://www.elexon.co.uk/bsc-related-documents/related-documents/bscps/">https://www.elexon.co.uk/bsc-related-documents/related-documents/bscps/</a>

---

ISG196/xx

CP1492

CP Progression Paper

---

17 July 2017

Version 1.0

Page 10 of 11

© ELEXON Limited 2017

External Links		
Page(s)	Description	URL
2	Data Transfer Catalogue on Master Registration Agreement Service Company website	<a href="https://dtc.mrasco.com/Default.aspx">https://dtc.mrasco.com/Default.aspx</a>
2	ELEXON Portal	<a href="https://www.elexonportal.co.uk/">https://www.elexonportal.co.uk/</a>
2	Guidance on LLF submission, audit and approval	<a href="https://www.elexon.co.uk/bsc-related-documents/bsc-guidance-notes/">https://www.elexon.co.uk/bsc-related-documents/bsc-guidance-notes/</a>
2	Issue 65 page on ELEXON website	<a href="https://www.elexon.co.uk/smq-issue/issue-65/">https://www.elexon.co.uk/smq-issue/issue-65/</a>
2	SVG191 summary	<a href="https://www.elexon.co.uk/meeting/svg-191-2/?from_url=https://www.elexon.co.uk/events-calendar-item/svg-191/">https://www.elexon.co.uk/meeting/svg-191-2/?from_url=https://www.elexon.co.uk/events-calendar-item/svg-191/</a>
3	CP1492 page on the ELEXON website	<a href="https://www.elexon.co.uk/change-proposal/cp1492/">https://www.elexon.co.uk/change-proposal/cp1492/</a>

ISG196/xx

CP1492  
CP Progression Paper

17 July 2017

Version 1.0

Page 11 of 11

© ELEXON Limited 2017