

CP1492 'Causes and treatment of large Line Loss Factors'



Contact

Chris Wood

020 7380 4142

chris.wood@elexon.co.uk



Contents

1	Why Change?	2
2	Solution	3
3	Impacts and Costs	6
4	Implementation Approach	8
5	Initial Committee Views	9
6	Industry Views	10
7	Final Committee Views and Decision	17
	Appendix 1: Glossary & References	19

About This Document

This document is the CP1492 Final Change Proposal (CP) Report which ELEXON has published following the final decision from the ISG and the SVG 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's and the SVG's views on the proposed changes and the views of respondents to the CP Consultation, along with the final decision on whether to approve this change.
- Attachments A-D contain the approved redlined changes to deliver the CP1492 solution.
- Attachment E contains the full responses received to the CP Consultation.

CP1492
Final CP Report

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Page 1 of 20

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1 Why Change?

What is the issue?

Line Loss Factors (LLFs) are values calculated and applied to Metered (and Unmetered) Volumes to account for distribution losses. Importing sites are normally assigned a LLF value greater than 1 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 less than 1. Section 3.1 of [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 LLFs that will apply for the forthcoming BSC Year.¹

Before implementation of new annual LLF values at the start of each BSC Year², ELEXON is required to review LLF methodologies submitted by LDSOs against the BSCP128 Principles. Following Panel approval of LLF calculation methodologies, each LDSO must calculate LLFs in accordance with the approved methodology and submit them to ELEXON. ELEXON then conducts an audit of the calculations for Panel approval³.

At [SVG191](#) in January 2017, the SVG discussed two instances of large⁴ SVA LLF values submitted for BSC Year 2017/18 and 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 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, members expressed concern over whether these values were representative of network losses caused by the site, noting the potential for 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 Time of Day (SToD)⁶ period which would otherwise result in high LLFs. The Issue 65 Report was tabled at the BSC Panel Meeting on 8 June 2017 ([267/04](#)) and ELEXON raised CP1492 to make the necessary changes to BSCP128 and associated Appendices.



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 The BSC Year runs from 1 April to 31 March.

² LLFs are Settlement Period and Settlement Day specific and do not change during different Settlement Runs.

³ 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.

⁴ 'Large', for these purposes, refers to any LLF value greater than 2.0.

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

⁶ SToD distribution losses vary with the time the power is taken by the customer. Typically there will be LLFs for Day, Night, Summer Day, Winter Day and Winter Peak. SToD periods are specified in the LDSO's methodology statement and are available via the ELEXON Portal.

Proposed solution

ELEXON raised [CP1492 'Causes and treatment of large Line Loss Factors'](#) on 21 June 2017. CP1492 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 will allow LDSOs to use alternative calculations specifically for instances that would result in high LLF values not reflective of actual losses.

Proposer's rationale

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

ELEXON presented the Issue Group with an example scenario (Attachment E to the Issue 65 Report) of an SVA site with embedded generation. Calculations 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 already take steps within the existing 16 Principles to correct high LLF values. However, there is a lack of consistency between LDSOs in how they are applied. The introduction of a 17th Principle would ensure consistency, transparency and accuracy of LLF calculations across all LDSOs.

Redlining

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

Issue 65 Group proposed redlining

The proposed redlining was originally developed as part of Issue 65. However, agreement on the wording to be used was not unanimous. Five of the six Issue Group members recommended that ELEXON raise a CP to include a 17th Principle into BSCP128 as described above.

The sixth member remained neutral, believing that the proposed redlined changes could potentially complicate auditing and undermine the other 16 Principles with unwanted consequences. Additionally, the member sent a post-meeting note asking for more clarity on what is meant by the 'default replacement process' and the 'default calculation'. They believed that further work was required to bring the proposed solution to a workable process. ELEXON replied that LDSOs are expected to define the 'default replacement process' and the 'default calculation' in their methodology statements as per the proposed Principle 17.

The majority of the Issue Group members agreed that the proposed redlining submitted by ELEXON was suitable. On this basis, we issued this redlining as part of the CP1492 consultation and sought opinion from industry participants. Following the consultation, we have amended the proposed redlining based on responses. The only change between the proposed redlining and the approved redlining is that we will no longer be changing the wording of Principle 8.

'Default replacement process' and 'default calculation'

ELEXON did not think that further clarification was required on these two terms. However, given that the Issue Group did not have the opportunity to consider the one member's post-meeting concerns, we asked a specific consultation question on whether further clarification was required. The respondents to the consultation were generally in agreement with ELEXON that no further clarification was required. We have therefore left the redlining unchanged in this area.

'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 Group members were neutral, one member wished to remove 'large' and one wished to keep it. The Issue Group agreed to include the word 'large' in the draft redlined text and so this was the wording we issued in the CP1492 consultation.

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 was 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 would be the responsibility of the LDSO to justify their interpretation of 'large' alongside their use of a 'default calculation'.

Given the amount of discussion at the Issue Group meeting on whether or not to include the word 'large' we felt it appropriate to specifically consult on the inclusion of the word 'large' in the revised text. Of the nine respondents to CP1492, seven agreed that 'large' is appropriate, one had no opinion and one suggested that 'high' or 'low' may be more appropriate. We have therefore left the redlining unchanged in this area, such that it continues to include the word 'large'.

Change to Principle 8

The Issue Group also agreed to change Principle 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 was outside the scope of the issue. We included it in the redlining for the CP1492 consultation on the basis of the majority Issue Group view but asked respondents for their opinion as to whether it is an appropriate change. Of the nine respondents, five stated that the change would have no impact, two offered no opinion but two thought that the change would have an impact and disagreed

strongly with this change. Given that this part of the proposed redlining was not connected directly to the issue that CP1492 seeks to resolve, and due to the arguments put forward by the two respondents that would be impacted (see section six below), ELEXON has removed this change from the CP1492 redlining following the consultation – reverting to the existing BSCP128 redlining in this area. This removal has no material impact on the CP1492 solution.

3 Impacts and Costs

Central impacts and costs

Central impacts

CP1492 will require changes to BSCP128 and three of its Appendices (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. This comprises:

- One day to implement changes to BSCP128 and Appendices; and
- Six days to review and implement changes to ELEXON's LLF audit process and LLF guidance note.

Once implemented, there will be no ongoing impacts or costs. Assessing 'default processes' will form part of the business as usual activity of 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 LLF calculation methodologies to include Principle 17 when calculating LLFs for future BSC Years. Should the LDSO wish to use a 'default process' to prevent large LLFs, then the changes in calculation of Site Specific LLFs may be required, thus impacting current tools used by LDSOs. In order to make these changes there will be some costs incurred in initial implementation.

Consultation respondents did not provide precise figures, but those that said they would incur costs indicated that they would be small to negligible. Of the nine respondents to the consultation, five said they would be impacted by the implementation of CP1492. Those that would be impacted expect that the implementation of a new 17th Principle would have minimal impact other than updating their procedures, which for some is a routine business as usual activity anyway. All five affected respondents are LDSOs. Two of these five stated that the change to Principle 8 (which we have since removed) would have a greater impact than the introduction of a 17th Principle.

There were four respondents that said they wouldn't be impacted. Of these four, only one is an LDSO and the proposed change reflects their existing processes. It was also noted by one of these four (a Supplier) that there would be a positive impact for them and their customers as they 'should not be exposed to high LLFs in high generation but low consumption situations'.

There were three respondents that said they would incur costs as a result of implementing CP1492. Two of them said that the costs would be 'negligible' and 'will not be material'. The third respondent that said they would incur costs would be in relation to resource 'to produce Site Specific LLFs for both day and night (as a minimum)'.

No other BSC Parties or Party Agents will be impacted.

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

4 Implementation Approach

Approved Implementation Date

CP1492 has been approved 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. All nine respondents to the consultation agreed with the implementation approach for CP1492.

ISG's initial views

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

An ISG Member noted that 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 LDSO would be expected to provide their own within its methodology statement.

An ISG Member asked for clarification on what 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 2018/19 LLF Audit. ELEXON noted that the February Release was a proposed release date and could be rethought if issues were raised during the consultation [as noted above, all respondents agreed with the proposed implementation approach]. However, LDSOs will start working on the 2019/20 methodologies in March 2018, so the 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.

6 Industry Views

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

Summary of CP1492 CP Consultation Responses				
Question	Yes	No	Neutral/ No Comment	Other
Do you agree with the CP1492 proposed solution?	8	0	0	1
Do you agree that the draft redlining delivers the CP1492 proposed solution?	7	0	0	2
Do you agree that no further clarification is required for the term 'default replacement process'?	7	1	0	1
Do you agree that no further clarification is required for the term 'default calculation'?	6	1	0	2
Do you agree with the word 'large' in the redlined text is suitable? If you disagree, what would be your suggested alternative?	7	1	1	0
Do you believe that changing 'Generic' to 'all' will have a material impact on LDSOs?	2	5	2	0
Will CP1492 impact your organisation?	5	4	0	0
Will your organisation incur any costs in implementing CP1492?	3	6	0	0
Do you agree with the proposed implementation approach for CP1492?	9	0	0	0
Do you have any further comments on CP1492?	1	8	0	0

The one respondent that did not fully agree with the CP1492 proposed solution ('Other' in the above table) disagreed with the changes to Principle 8 (which we have since removed) but agreed with the introduction of Principle 17.

Of the two respondents that did not fully agree that the draft redlining delivers the CP1492 solution (again marked as 'Other'), one of these disagreed with the change to Principle 8 (since removed), but agreed with the remaining draft redlining. The other respondent partly agreed with the draft redlining but suggested that '200 kWh' would be a better unit that '200 kVA' proposed in BSCP138 Appendix 3 and Appendix 10. As we explain below, if the LDSO feels that this is the appropriate 'default calculation' or 'default replacement process' and they can justify this, then it may be used.

Introduction of a 17th LLF calculation principle

Use of a 'default replacement process' and 'default calculation'

Of the nine responses received, seven agreed that no further clarification was required for 'default replacement process'. One respondent ('Other' in table above) commented on the example given for a 'default replacement process' but otherwise agreed that no further clarification is required.

Six of the nine respondents agreed that 'default calculation' does not require further clarification. One respondent ('Other' in the table above) agreed that the term doesn't require further clarification on what is meant by 'default calculation' but, as with 'default replacement process', the same respondent commented on the example given in the draft redlining. One respondent ('Other') agreed that the terms are clear but suggested that Principle 17 should refer to only one of 'default replacement process' or 'default calculation'. Their reason for this is that they are concerned that the option of a default calculation would in effect be a cap on LLFs that would result in systematically under-calculating Site Specific LLFs.

One respondent didn't agree that the terms 'default replacement process' and 'default calculation' require no further clarification and indeed would welcome more guidance. This respondent was the same Issue Group member who originally argued that further clarification was needed. Our view remains that no further clarification is required to the redlining in line with the view of the other respondents. Therefore we have not amended the draft redlining in this area. However we will, as explained below, be issuing further guidance.

'Large' consumption or generation volumes

CP1492 proposes that the wording of Principle 17 should be 'Where the usage profile for a given site contains insufficiently large consumption or generation volumes to enable calculation of realistic Site Specific LLFs then a default calculation, or default replacement process shall be undertaken'. The Issue 65 Group debated whether to include the word 'large' or not.

Of the nine respondents, seven agreed that this is a suitable word to use. One respondent had no view on the use of the word 'large'. One respondent however, suggested that the word 'high' or 'low' should be used instead.

Using the word 'high' would mean that the range of data relating to consumption or generation volumes within the site's usage profile would have to be above average for 'high' to be appropriate. Similarly, for 'low', it would need to be below average. The difficulty in using either of these words is that we would then need to define what the average is. We have therefore left this area of the redlining unchanged and kept the word 'large'.

Value of unity in 'defaults'

One respondent suggested that rather than using a fixed threshold for calculation (e.g. 200 kVA) it may be more accurate to substitute large LLF for a value of unity. Another respondent questioned the units presented in the proposed redlining (kVA instead of kWh). These were included in the redlining as an example following the Issue Group's discussion. So long as the LDSO can justify why they consider this to be a suitable 'default replacement process' or 'default calculation' when submitting their methodology statement and/or when audited, then there is no reason why the use of any suitable unit (e.g. use of kWh instead of KVA) should not occur. This is true of any alternate means of calculating LLF used to give a fair and reflective value, so long as the reason and method can be justified when audited.

ELEXON response

It was agreed by the Issue 65 workgroup that the new Principle 17 should not be overly prescriptive and that LDSOs should be allowed sufficient leeway to implement it in a way that best suits their unique circumstances and situations.

There is no obligation for LDSOs to use either default process. They do not have to use either default, but they can use one or both if appropriate. LDSOs will be required to justify, in their methodology statements, their approach to using either a 'default calculation' or 'default replacement process', or both. If it is not used, then we would expect that site to be charged more than they should be for their share of network losses (and equally everyone else paying less). Where a 'default' is used, we expect that this would lead to greater fairness in the spread of losses across all parties.

Principle 17 should only be used 'Where the usage profile for a given site contains insufficiently large consumption or generation volumes...'. The use of a 'default' should only be used to adjust the LLF to reflect the actual losses and only then if the LDSO can justify their reason for using a 'default'. If the LDSO is unable to justify how and why they have applied Principle 17, then it will not be permitted.

Audit of LLF calculation methodology

LDSOs applying Principle 17 will be required to record these instances and the reasons for applying it. The use of the new Principle 17 will be subject to audit by BSCCo when we review LDSO calculation methodologies and carry out the LLF audit process. LDSOs will need to justify their rationale where they use calculations based on the 17th Principle.

We would expect that the LDSO can explain, in detail exactly why they feel that it is necessary to use a 'default' and what the Settlement benefit is of doing so.

Further guidance

Consultation respondents and Issue Group members have suggested that some LDSOs are already taking steps, within the existing 16 Principles, to correct high LLFs. However, we recognise that their current approaches may not be the same as the new Principle 17 and, to help LDSOs apply the new principle, we will look to add further information in our LLF guidance documents. Similarly, at the suggestion of a respondent, we will look into updating the Calculation Self-assessment Document (CSAD) spreadsheet⁷ to make it easier for LDSOs to show where they are applying the new Principle. Suggested amendments to the CSAD spreadsheet will be consulted on with LDSOs prior to implementation of CP1492.

Changes to Principle 8

The CP1492 consultation proposed that Principle 8 should be redlined: 'As a minimum, ~~Generic~~ all LLFs shall be calculated separately for Day and Night'.

It was recognised in the consultation and by the Issue Group 65 that this is not directly connected to the issue that CP1492 seeks to address. Only two of the eight respondents thought that this would have a material impact on LDSOs. However, on the basis of the

⁷ Note: this is not the same spreadsheet as BSCP128 Appendix 5. This is a form that ELEXON sends to LDSOs each year as part of the LLF methodology calculation cycle.

arguments put forward by those two respondents (see below), ELEXON removed the proposed change to Principle 8 from the redlining. This removal has no material impact on the CP1492 solution and was approved by the ISG and the SVG.

Site specific LLFs

One LDSO raised concerns that amending Principle 8 would not result in the overall network losses being reduced and as such, there is a risk that the cost of losses will not be attributed fairly amongst all network users based on their actual losses. As such, they requested that Principle 8 is not changed.

Site specific LLFs are normally used for those sites that have notably large demand from, or generation to, the Distribution System. Due to their size they will represent a large proportion of the energy on a Distribution System and hence the overall losses or gains.

Because they are site specific they are accepted as being a fair representation of the actual losses occurring. If LDSOs are required to use both day and night LLFs where they are currently using one LLF for the entire Settlement Day, then there is a risk that this could result in either the new day nor new night LLFs not being representative of actual losses. Additionally, this could also cause customers to change their usage profiles to take financial advantage of their new LLFs, thus distorting the distribution of losses on the network as a whole.

It is recognised that this may not be applicable to all site specific LLF calculations, or even all LDSOs.

CVA fixed loss constant

One respondent expressed concern that changing Principle 8 to require LLFs for day and night may not be appropriate for sites that use 'CVA fixed loss constants'. They explained that 'CVA fixed loss constant' is a single value and not a set of values. Their concern is that it would be problematic to incorporate separate calculations for day and night and therefore requested that the wording of Principle 8 is not changed.

ELEXON recommendation

Five respondents stated that changing Principle 8 would not have a material impact on LDSOs. Of these five, two stated that they believe LDSOs are already using (at least) day and night LLFs and a third responded to question one that the CP1492 solution (including changes to Principle 8) already reflects what they are doing.

It is clear that changing Principle 8 would affect some LDSOs, but not all. In the absence of any detailed analysis or data, we are unable to determine the breadth of this potential issue and how it affects site specific LLFs or CVA fixed loss constants.

Given that this change is not part of the main solution for CP1492 and that it was proposed by the Issue Group 65 as an additional item to consider, ELEXON recommended not implementing this wording change at this time. As such, we have removed it from the redlining. We will be happy to discuss further with any Party that might wish to raise this as a potential future CP.

Comments on the proposed redlining

Comments on the CP1492 Proposed Redlining		
Document & Location	Comment	ELEXON's Response
BSCP128 3.1.8	As a minimum, Generic LLFs shall be calculated separately for Day and Night. Site Specific LLFs shall be calculated on a single annual basis only.	We do not intend to change Principle 8 following review of consultation responses.
BSCP128 3.1.17	17. Where the usage profile for a given site contains insufficiently large consumption or generation volumes to enable calculation of realistic Site Specific LLFs then a default replacement process shall be undertaken.	LDSOs may use either 'default calculation' or 'default replacement process' as the situation requires, but should not be used to cap high LLFs. The use of a default has to be justified and won't just be accepted.
BSCP128 3.5.7(f)	Amend to reflect above refinement of the proposed principle 17.	LDSOs may use either 'default calculation' or 'default replacement process' as the situation requires, but should not be used to cap high LLFs. The use of a default has to be justified and won't just be accepted.
BSCP128 3.5.7(f)	Optional inclusion of a reference to a unity LLF. Please note that we have no strong preference to include. (ii) if for a given SToD period/periods <i>generic or unity</i> LLF values were applied.	Either may be used as long as the LDSO can justify their use.
BSCP128 3.1.17	Where the actual usage profile for a given site contains insufficiently large consumption or generation volumes that do not meet the de minimis requirements to enable calculation of a realistic Site Specific LLFs then a default calculation, or default replacement process shall be undertaken.	The intention is that Principle 17 is used where the LDSO feels it is appropriate and justifiable, not when triggered by a 'de Minimis'.
BSCP128 3.1.8	We also think, potentially, there could be an issue surrounding the change of the wording 'Generic' to 'All' with regards to CVA constants using the LLF calculations Methodology as an auditable document.	We do not intend to change Principle 8 following review of consultation responses.
BSCP128 3.1.17	We are unclear about the use of the term 'large', perhaps 'high' or 'low' consumption could skew the calculated losses values?	The words 'high' or 'low' are used relative to an average. 'Large' is in reference to an amount therefore more appropriate.
BSCP128 3.5.7	Clarity concerning the guidance note and the use of the term 'kVA', should it	Either can be used as long as it is justifiable. This is just an example.

Comments on the CP1492 Proposed Redlining

Document & Location	Comment	ELEXON's Response
	be 'kWhs'?	
BSCP128 Appendix 1 1.3.8 and 1.3.17	Update to reflect changes to principles 8 and 17 suggested above.	We do not intend to change Principle 8 following review of consultation responses. LDSOs may use either 'default calculation' or 'default replacement process' as the situation requires, but should not be used to cap high LLFs. The use of a default has to be justified and won't just be accepted.
BSCP128 Appendix 1 1.3.8	We also think, potentially, there could be an issue surrounding the change of the wording 'Generic' to 'All' with regards to CVA constants using the LLF calculations Methodology as an auditable document.	We do not intend to change Principle 8 following review of consultation responses.
BSCP128 Appendix 1 1.3.17	We are unclear about the use of the term 'large', perhaps 'high' or 'low' consumption could skew the calculated losses?	The words 'high' or 'low' are used relative to an average. 'Large' is in reference to an amount therefore more appropriate.
BSCP128 Appendix 3 1.3.15	Update to reflect changes to principle 17 suggested above.	LDSOs may use either 'default calculation' or 'default replacement process' as the situation requires, but should not be used to cap high LLFs. The use of a default has to be justified and won't just be accepted.
BSCP128 Appendix 3 1.3.15	Suggested text: For example SVA or CVA sites where for a given STOD period instead of applying calculated LLF, a calculation was performed using a defined threshold (e.g. 200 kVA) or a substitute LLF was applied such as a generic or unity LLF. Again this is an optional suggestion only.	Either may be used as long as the LDSO can justify their use.
BSCP128 Appendix 3 1.3.15	Some further clarity on what the DNO is expected to document as part of the default calculation/replacement process would be useful i.e. which LLFs are impacted, justification or any other information? Would it be useful to document the information in the CSAD-Appendix 5?	The CSAD and LLF Guidance documents will be updated to give further clarity.

Comments on the CP1492 Proposed Redlining		
Document & Location	Comment	ELEXON's Response
BSCP128 Appendix 3 Paragraph 1.3.15	We are unclear about the use of the term 'large', perhaps 'high' or 'low' consumption could skew the calculated losses?	The words 'high' or 'low' are used relative to an average. 'Large' is in reference to an amount therefore more appropriate.
BSCP128 Appendix 10 1.3.12	Update to reflect changes to principle 17 suggested above.	LDSOs may use either 'default calculation' or 'default replacement process' as the situation requires, but should not be used to cap high LLFs. The use of a default has to be justified and won't just be accepted.
BSCP128 Appendix 10 1.3.12	Suggested text: For example SVA or CVA sites where for a given SToD period instead of applying calculated LLF, a calculation was performed using a defined threshold (e.g. 200 kVA) or a substitute LLF was applied such as a generic or unity LLF. Again this is an optional suggestion only.	Either may be used as long as the LDSO can justify their use.
BSCP128 Appendix 10 1.3.12	Clarity concerning the guidance note and the use of the term 'kVA', should it be 'kWhs'?	Either may be used as long as the LDSO can justify their use.

One respondent made additional comments that, in their opinion, a wider review of methodologies should be undertaken. We continuously review specific areas of the BSC and associated BSCPs as we become aware of issues arising and are always open to Changes Proposals. At this time however, considering the resource implications, potential impact on industry and time to implement any changes, there is no plan to conduct a comprehensive review of LLF calculation methodologies.

ISG's final views

The ISG raised no objections to CP1492 being implemented but there were some observations made and questions asked before agreeing approval.

Clarification was sought on whether or not the guidance on the 17th Principle would include that ELEXON expect the principle to be followed unless a suitable explanation is supplied. It was explained that until recently there were two LDSOs that were already using a similar method to treat the issue of large LLFs, and doing this did not violate any of the other 16 principles. With the introduction of the 17th principle, the guidance would note that if an alternative method to calculating a site specific LLF were used, an explanation would be required. LDSOs will also be obligated to highlight the relevant instances in the documentation submitted to ELEXON.

A discussion was held around scenarios where there are relatively low consumption/generation on site but the resulting high LLF is actually representative of losses and therefore a 'default calculation' or 'default replacement process' is not appropriate. It was explained that the data used by LDSOs to calculate LLFs is representative of the past usage/generation (data 3 years prior to the BSC Year for which the LLFs are being calculated). As a result, there is uncertainty as to whether the site changed usage since then. The 17th Principle shouldn't just be used to reduce the LLF but should only be applied when the LDSO can justify its use which will be reviewed and audited by ELEXON. If there is no justification for applying the 17th Principle, then it will not be permitted. The 17th Principle is designed so that LLFs are representative of actual losses, even if they are relatively high.

The ISG Member noted that at the moment only a few LDSOs and sites are affected. If this became a wider issue, consideration should be given to how fixed losses are allocated. ELEXON responded that the 17th Principle was introduced as the most pragmatic option based on information available now. However, if it becomes clear that further action is required due to future audits, ELEXON would be happy to revisit.

SVG's final views

As with the ISG, the SVG raised no objections to CP1492 being implemented but there were some observations made and questions asked before agreeing approval.

One point discussed was whether or not there would be any more high value LLFs with the introduction of the new 17th Principle. This is still possible if the LDSO decides not to use a default calculation. The 17th principle would be used if, for example, there is a SToD period with low volume of energy and as a result the LLF would be high compared to periods where there is a higher energy volume recorded. We have not previously spotted high LLFs. This might be a result of no instances like the one discussed during Issue 65 or due to the two LDSOs that have taken action to reduce the LLF within the other 16 Principles. With the introduction of the 17th principle though, the LDSOs will now be obliged to tell ELEXON when they have used a 'default calculation' or 'default replacement process'.

We have recently approved two LDSO's methodologies where they have stated that they are applying the spirit of the 17th Principle within the existing 16 Principles and they have highlighted where. Previously, we may not have been able to spot this as the sites where it has been applied would have been a few amongst many other generic sites and therefore very difficult to spot without spending a disproportionate amount of time pouring

over lines and lines of data. ELEXON made clear that there is no reason to think the 'large' values of LLFs used were incorrect.

Similar to the ISG, there was a discussion about scenarios whereby a site had low Active Energy Export or Import then the LLF calculation based on the past data will be reflective of the losses as long as the site uses/generates the same amount of energy in the same pattern. The concern would be if a large LLF is used and then the consumption changes, then the metered volume losses would be very high. It was explained that this is why we will ask LDSOs to highlight each case when a default calculation was applied and assess on a case by case basis. ELEXON believes that the solution is currently the most pragmatic one available and will continue to assess it and analyse its effectiveness.

It was suggested that if we find LDSOs using this more often, we could amend the 17th Principle and could possibly hold an Issue Group to discuss what changes were needed. ELEXON reiterated that this is a new process and that we will continue to evaluate its effectiveness and would be open to making changes if needed.

Final decision

The ISG and the SVG have:

- **APPROVED** CP1492 for implementation on 22 February 2018 [as part of the February 2018 BSC Systems Release].

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/
7	ISG196	https://www.elexon.co.uk/meeting/isg-196/
7	SVG198	https://www.elexon.co.uk/meeting/svg-198/