

## **Balancing and Settlement Code**

### **BSC Procedure**

### **BSCP128 - Appendix 4**

### **Line Loss Factor Calculation Self Assessment Document (CSAD) for Embedded LDSOs that Mirror**

**Version 1.0**

**Effective Date: 20 April 2009**

## **BSCP128 - Appendix 4**

### **Relating to**

### **Line Loss Factor Calculation Self Assessment Document (CSAD) for Embedded LDSOs that Mirror**

1. Reference is made to the Balancing and Settlement Code (the Code) for the Electricity Industry in Great Britain and, in particular, to the definition of "BSC Procedure".
2. This is BSCP128 Appendix 4, Version 1.0 relating to the Calculation Self Assessment Document (CSAD) for Embedded LDSOs that Mirror.
3. This BSC Procedure Appendix is effective from 20 April 2009.
4. This BSC Procedure has been approved by the Panel.

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### AMENDMENT RECORD

Version	Date	Description of Changes	CRs Included	Mods Panel Ref
1.0	20/04/09	First Published	P216	153/04

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~~1. calculation assessment document (cSAD) for embedded IDSOS that mirror~~

~~NAME OF APPLICANT:~~

**Authorised Person:**

**Having made appropriate enquiries of other directors and officials of the organisation, we confirm that:**

- ~~• the Line Loss Factor Calculation Self Assessment Document (CSAD) is true, complete and accurate and not in breach of the provisions under the Balancing and Settlement Code; and~~
- ~~• in our opinion, the arrangements as documented are adequate and appropriate for the provisions under the Balancing and Settlement Code.~~

\_\_\_\_\_  
**Approved by**

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_  
**Print Name**

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_  
**Signature**

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\_\_\_\_\_  
**Position**

**Note:** The CSAD should be signed off by a Person of relevant Authority for and on behalf of their company in respect of the submission of the Line Loss Factor Methodology.

**1.1. INTRODUCTION****Objectives of the CSAD**

The Audit of Line Loss Factors seeks to provide additional transparency and consistency regarding the calculation and application of Line Loss Factors (LLFs) used in Settlement by creating a set of high level principles, which all LLF methodologies (created by Licensed Distribution System Operators (LDSOs)) must adhere to. The principles are detailed in BSCP128 'Production, Submission, Audit and Approval of Line Loss Factors'. For Embedded LDSOs that Mirror another LDSO's methodology, they must obtain the LLFs (either from that LDSO or from the BSC Website), process the LLF data in accordance with their own valid Line Loss Factor Groups and Classes and submit them to BSCCo (the LLFs must be in accordance with the methodology approved by the Panel). An audit of the Embedded LDSO's LLF calculations/processing is required to ensure that the LLFs are consistent requirements of the BSC Section K and BSCP128 (and in accordance with the approved methodology).

This Calculation Self Assessment Document for Embedded LDSOs who Mirror (CSAD) is designed to gather factual information about the compliance of the LLF calculations/processing and the methodology it applies to.

For any defined terms see BSCP128. All defined terms are initially capitalised. Any other terms please refer to the Balancing Settlement Code.

**Guidance for completing the CSAD**

The CSAD has been split into three sections as follows:

**1.1 Introduction****1.21 General Information**

This section should be completed in full in respect of all questions.

**1.32 Calculation/Processing Applicability Section.**

Embedded LDSOs should provide information to which GSP Groups and LDSOs' methodologies the calculation/processing applies to.

**1.43 Calculations/Processing Assessment Section.**

This section contains a series of questions, for each of which guidance is provided in order to either provide clarification or to set out the areas the response should address.

The Embedded LDSO should also indicate what evidence is available to support the responses given. This evidence will need to be available to BSCCo for the audit to review take place. References to 'systems' within the CSAD do not relate solely to the functionality of computer hardware and software, but extend to the supporting business and operational processes (including manual processes). The term 'development' in relation to a system refers to either the development of a new system or to any significant changes or upgrades in respect of an existing system.

The final question in this section is not mandatory and is provided so that Embedded LDSOs can provide any additional information that they consider to be relevant to their LLF and CSAD submission.

<b>21.1 General Information</b>	
<b>Distribution Company Name:</b>	
<u>We confirm that:</u> <ul style="list-style-type: none"> <li>the Line Loss Factor Calculation Self-Assessment Document (CSAD) is true, complete and accurate and not misleading because of any omission or ambiguity or for any other reason; and</li> <li>in our opinion, the arrangements as documented are adequate and appropriate for the provisions under the Balancing and Settlement Code Section K and BSCP128 'Production, Submission, Audit and Approval of Line Loss Factors.'</li> </ul>	
<b>Authorised Signature:</b>	
<b>Name of Authorised Signatory:</b> (Category X as per BSCP38 'Authorisations')	
<b>Password:</b>	
<b>Date:</b>	
<b>VERIFICATION OF DETAILS</b> <i>To be completed by BSCCo</i> DATE RECEIVED: _____ NAME AND PASSWORD/SIGNATURE VALID (Y/N): _____	

<b>4.31.2 Calculation/Processing Applicability</b>		<b>Details:</b>	
Please give details of the relevant GSP Groups, as an Embedded LDSO, you are operating in:		<del>Please state the LDSO's methodology that the Mirrored LLFs comply with.</del>	
<b>GSP Group</b>	<b>Operating in this GSP Group?</b>	<del>Host LDSO Name</del>	<del>Methodology statement version &amp; date</del>
<u>A</u> Eastern	<u>Yes/No</u> <del>Y/N</del>		
<u>B</u> East Midlands	<u>Yes/No</u> <del>Y/N</del>		
<u>C</u> London	<u>Yes/No</u> <del>Y/N</del>		
<u>D</u> Merseyside and North Wales	<u>Yes/No</u> <del>Y/N</del>		
<u>E</u> Midlands	<u>Yes/No</u> <del>Y/N</del>		
<u>F</u> Northern	<u>Yes/No</u> <del>Y/N</del>		
<u>G</u> North Western	<u>Yes/No</u> <del>Y/N</del>		
<u>H</u> Southern	<u>Yes/No</u> <del>Y/N</del>		
<u>J</u> South Eastern	<u>Yes/No</u> <del>Y/N</del>		
<u>K</u> South Wales	<u>Yes/No</u> <del>Y/N</del>		
<u>L</u> South Western	<u>Yes/No</u> <del>Y/N</del>		
<u>M</u> Yorkshire	<u>Yes/No</u> <del>Y/N</del>		
<u>N</u> South Scotland	<u>Yes/No</u> <del>Y/N</del>		
<u>P</u> North Scotland	<u>Yes/No</u> <del>Y/N</del>		



<b>4.31.2</b> Calculation/Processing Applicability	<b>Details:</b>
Are the LLFs for each GSP Group you are operating in obtained from the LDSO or the BSCCo Website? Please provide details on how you have obtained the LLFs by GSP Group.	
<del>Have you re-calculated</del> <b>Do you have</b> any Site Specific <u>sites</u> /LLFs? <del>since the last annual submission?</del> If so please provide details.	

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**1.41.3 LLF Calculations/Processing Assessment**

No.	Question	Guidance	Response	Evidence
1a	<b>Please provide details of the calculation method for <u>Site Specific</u> LLFs.</b>	<p>Please give a description of the calculation method used. This should include a reference to the location in the methodology statement.</p> <p>The LDSO may wish to include an illustrative example as evidence.</p> <p>If you have no Site Specific LLFs please indicate as N/A.</p>		
1b	<b>Please provide details of the process steps for your calculation of <u>Site Specific</u> LLFs.</b>	<p>Please give a description of the end to end process for calculating Site Specific LLFs.</p> <p>The LDSO may wish to include high level flow diagram of the process or internal working instructions that detail the process.</p> <p>If you have no Site specific LLFs please indicate as N/A.</p>		
2a	<b>Please provide details of how you have obtained the Host LDSO's Generic LLFs. Split by Host LDSO and identify which GSP Group (s) the LLFs are applicable for.</b>	<p>Please give a description of the method used to obtain the Host LDSO's Generic LLFs. This should include a reference to the location on either the BSCCo's website or how obtained from the Host LDSO's website if applicable.</p> <p>Split by GSP Group and Host LDSO</p>		

**1.41.3 LLF Calculations/Processing Assessment**

No.	Question	Guidance	Response	Evidence
2b	<b>Please provide details of the process steps for your manipulation of a Host LDSO's Generic LLFs. If different by Host LDSO please give specific details.</b>	<p>Please give a description of the end to end process for the manipulation of the Host LDSO LLFs so as to construct you Generic LLFs submission by GSP Group.</p> <p>LDSO may wish to include high level flow diagram of the process or internal working instructions that detail the process.</p>		
3	<b>Please complete the table of information for all Site Specific and Generic LLFs as detailed in section 2.</b>	<p><u>Data can be submitted in Excel file format with your CSAD submission.</u></p> <p>Section 2 is for supporting information for Site Specific and Generic data information submission. This information is used to aid the validation of the LLF data submission. LDSOs may choose to submit the information in Excel format as an attachment to the CSAD.</p>		
4	<b>Have all changes or new SVA LLFC IDs been submitted into the Market Domain Data (MDD) change process (as per BSCP509)? If so please give details.</b>	Any changes or new LLFC IDs must be submitted through the MDD change process. The correct LLFC IDs (and supporting information) are required to be approved in MDD prior to submission of the SVA LLFs. LDSOs should confirm that the MDD Change		

**1.41.3 LLF Calculations/Processing Assessment**

No.	Question	Guidance	Response	Evidence
		Request Form(s) (with CR References) have been submitted (see BSCP509 for further details).		
5	Have all SVA LLFs been submitted in the D0265 file format? <del>(Y/N)</del>	The file format for SVA LLF submission is detailed in Appendix 6 of BSCP128 or in the Data Transfer Catalogue.		
6	Have CVA LLFs been submitted in the specified long or short file format? <del>(Y/N)</del>	<p>The file format for CVA LLF submission is detailed in Appendix 5 of BSCP128.</p> <p>There are two formats that can be used, a long format detailing every Settlement Day and Settlement Period LLF and a short format detailing the LLF to be used for specified date ranges.</p> <p>The file requires a checksum, further information on calculating the checksum is detailed in section Appendix 5 of BSCP128.</p> <p>If CVA LLFs please indicate as N/A.</p>		
7	Are all LLFs submitted for start date 01 April (and start	The annual submission of LLFs covers the period 01 April to 31 March.		

**1.41.3 LLF Calculations/Processing Assessment**

No.	Question	Guidance	Response	Evidence
	Settlement Period 1)? If not please give details,	Confirmation is required that all LLFs in the submission start from Settlement Period 1 on 01 April.  Evidence will detail how this had been checked.		
8	Are all LLFs calculated <u>to at least 3 decimal places and submitted</u> to 3 decimal places? (Y/N)	LLFs are required to be calculated to three decimal places. Please confirm that all LLFs are calculated to 3.d.p in all files submitted.  Evidence should include details of how this validation has been carried out.		
9a	Are all SVA LLFs $\geq 0.$ <del>750000</del> and $\leq 1.250$ ? (Y/N)	Please confirm that all SVA LLFs are calculated within the range specified.  Evidence should include details of how this validation has been carried out.		
9b	Are all CVA LLFs $\geq 0.$ <del>750000</del> and $\leq 1.$ <del>250999</del> ? (Y/N)	Please confirm that all CVA LLFs are calculated within the range specified.  Evidence should include details of how this validation has been carried out.		
9c	Are there any SVA Site Specific LLFs that have significantly changed from the last submission of LLFs? BSCCo would therefore expect evidence	BSCCo will be validating the SVA submission in accordance with BSCP128 Section 3.5 point 7 c). BSCCo will identify any LLF values that are outside <u>of</u> <del>at the</del> range specified.		

**1.41.3 LLF Calculations/Processing Assessment**

No.	Question	Guidance	Response	Evidence
	to be provided for all LLFs which are expected to breach this tolerance.	<p><del>(+/- 20% change from the last LLF submission). Any values that fall outside of this range,</del> BSCCo will request from the LDSO evidence <u>for any values that fall outside of this range</u> and supporting rationale to justify this change.</p> <p><del>Evidence should include details of how this validation has been carried out and supporting rationale for the change in LLF Values.</del></p>		
9d	Are there any CVA LLFs that have significantly changed from the last submission of LLFs? BSCCo would therefore expect evidence to be provided for all LLFs which are expected to breach this tolerance.	<p>BSCCo will be validating the CVA submission in accordance with BSCP128 Section 3.5 point 7 <u>ed</u>).</p> <p>BSCCo will identify any LLF values that are outside <u>of the a-range</u> specified. <del>(+100% and -50% change from the last LLF submission). Any values that fall outside of this range,</del> BSCCo will request from the LDSO evidence <u>for any values that fall outside of this range</u> and supporting rationale to justify this change.</p> <p><del>Evidence should include details of how this validation has been carried out and supporting rationale for the change in</del></p>		

**1.41.3 LLF Calculations/Processing Assessment**

No.	Question	Guidance	Response	Evidence
		<del>LLF Values.</del>		
9e	Are there any new Site Specific sites that were not included in last year's submission? If so, please give details.	Please provide information in 2. 1 for any new Site Specific sites.  If you have no Site Specific sites please indicate as N/A.		
10	Have any sites undergone a Relevant Change? If so please provide details.	Relevant Changes are defined in BSCP128 as 'A significant change to the physical plant, apparatus, distribution network, or capacity which causes a change to the Line Loss Factors'.  Information and supporting evidence should be detailed in the response. MSIDs should be flagged with the relevant information as in 2.1.		
11	Please <del>give</del> <b>provide</b> details of the error checking processes carried out when calculating/manipulating LLFs.	LDSOs are required to have robust error detection and correction processes in place throughout the calculation of LLFs.  LDSOs may wish to provide references to their working instructions and/or process maps, including details on the error checking processes used in the calculation/manipulation process.		

**1.41.3 LLF Calculations/Processing Assessment**

No.	Question	Guidance	Response	Evidence
12	Have all Site Specific LLFs been calculated within the last 5 years? (Y/N).	<p>Site Specific LLFs must be calculated at least every 5 years. The cut off for the 5 year period is 30 September. Any failure to do so will lead to a non-compliance.</p> <p>For example, the annual LLFs for 1 April 201<del>16</del>, with calculations submission date of 1 October 201<del>05</del>, any Site Specific LLFs calculated up to <u>up to and including</u> 30 September 20<del>05</del><del>10</del> must <u>have</u> <u>been</u> re-calculated.</p> <p><del>The 5 year requirement will be operational from submissions for the 2011 annual re-load. Therefore any Site Specific LLFs calculated up to 30 September 2005 will need to be re-calculated for the 1 October 2010 submission.</del></p> <p>If you have no Site specific LLFs please indicate as N/A.</p>		
13	<u>Have all Generic LLFs been calculated within the last 2 years? (Y/N)</u>	<p><u>Generic LLFs must be calculated at least every 2 years. The cut off for the 2 year period is 30 September. Any failure to do so will lead to a non-compliance.</u></p> <p><u>For example, the annual LLFs for 1</u></p>		



**1.41.3 LLF Calculations/Processing Assessment**

No.	Question	Guidance	Response	Evidence
		<u>April 2011, with calculations submission date of 1 October 2010, any LLFs calculated up to 30 September 2008 must be re-calculated.</u>		
<b><u>1413</u></b>	<b>Does the calculation/manipulation involve third parties? If so please provide details</b>	Where aspects of the calculation/manipulation are sub-contracted to a third party the activity should be detailed in the response field (description of process, process maps, quality checks, etc). The LDSO is still responsible for any elements that it has contracted out.  For example, a LDSO may utilise a third Party to generate the Site Specific LLFs for a particular site.		
<b><u>1514</u></b>	<b>Is there any additional detail you would like to add to your response?</b>	Additional information that supports the audit of the process can be added here or appended to the document.		

## 2. APPENDICES

### 2.1 Site Specific and EHV generic supporting information for both CVA and SVA (if applicable)

MSID / LLFC	Circuit Name	Connecti on Voltage (kV)	<u>STOD 1<sup>1</sup></u> <u>LLF Voltage</u> <u>of circuit to</u> <u>which the</u> <u>Meter is</u> <u>connected</u> <u>(primary</u> <u>voltage) (kV)</u>	<u>STOD 2</u> <u>LLF Maxim</u> <u>um Export</u> <u>capability</u> <u>of</u> <u>connected</u> <u>Total</u> <u>System</u> <u>circuit</u> <u>(MVA)</u>	<u>STOD 3</u> <u>LLF Maxim</u> <u>um Import</u> <u>capability</u> <u>of</u> <u>connected</u> <u>Total</u> <u>System</u> <u>circuit</u> <u>(MVA)</u>	<u>STOD 4 LLF</u>	<u>STOD 5 LLF</u> <u>Maximum</u> <u>capacity of</u> <u>connection</u> <u>to the</u> <u>system</u> <u>(MVA)</u>	<u>Expected</u> <u>Import /</u> <u>Export</u> <u>volume</u> <u>behaviour</u>	When were the LLFs last calculated for the MSID?	Are the LLFs Site Specific?	Was the site included in the previous submission?	Have any of the MSIDs undergone a relevant change since the previous submission?
			<u>[Enter text</u> <u>description</u> <u>for STOD]</u> <sup>2</sup>	<u>Enter text</u> <u>description</u> <u>for STOD]</u>	<u>Enter text</u> <u>description</u> <u>for STOD]</u>	<u>Enter text</u> <u>description</u> <u>for STOD]</u>	<u>Enter text</u> <u>description</u> <u>for STOD]</u>					
									Date	Yes / No	Yes / No	Yes / No
									Date	Yes / No	Yes / No	Yes / No
									Date	Yes / No	Yes / No	Yes / No
									Date	Yes / No	Yes / No	Yes / No
									Date	Yes / No	Yes / No	Yes / No
									Date	Yes / No	Yes / No	Yes / No

<sup>1</sup> The number of Seasonal Time of Day (STOD) Periods may be greater than or less than 5, please amend the table accordingly for your submission.

<sup>2</sup> For example Day or Other.

## 2.2 Generic supporting information

Please complete a separate table for each GSP Group (these tables can be submitted in spreadsheet form).

<b>Generic Sites</b>				
<b>GSP Group: —</b>				
<b>LLFC Group</b>	<b>Voltage (EHV/HV/LV)</b>	<b>Applicable LLFCs</b>	<b>Last calculation date</b>	<b>No. of Metering Point Identification Numbers (MPANs)<sup>3</sup></b>

### Generic Sites

**GSP Group:**

<sup>3</sup>-Approximate numbers are acceptable at date of submission.

<u>LLFC Group</u>	<u>Voltage (EHV/HV/LV)</u>	<u>Applicable LLFCs</u>	<u>STOD 1<sup>4</sup> LLF</u>	<u>STOD 2 LLF</u>	<u>STOD 3 LLF</u>	<u>STOD 4 LLF</u>	<u>STOD 5 LLF</u>	<u>No. of Metering Point Identification Numbers (MPANs)<sup>5</sup></u>
			<u>[Enter text description for STOD]<sup>6</sup></u>	<u>[Enter text description for STOD]</u>	<u>[Enter text description for STOD]</u>	<u>[Enter text description for STOD]</u>	<u>[Enter text description for STOD]</u>	

<sup>4</sup> The number of Seasonal Time of Day (STOD) Periods may be greater than or less than 5, please amend the table accordingly for your submission.

<sup>5</sup> Approximate numbers are acceptable at date of submission.

<sup>6</sup> For example Day or Other.