

## **Balancing and Settlement Code**

### **BSC Procedure**

### **Production, Submission, Audit and Approval of Line Loss Factors**

**BSCP128**

**Version 1.0**

**Effective Date: 20 April 2009**

## **BSC Procedure 128**

### **Production, Submission, Audit and Approval of Line Loss Factors**

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 Version 1.0, relating to Production, Submission, Audit and Approval of Line Loss Factors.
3. This BSC Procedure is effective from 20 April 2009.
4. This BSC Procedure has been approved by the Panel.

#### **Intellectual Property Rights, Copyright and Disclaimer**

The copyright and other intellectual property rights in this document are vested in ELEXON or appear with the consent of the copyright owner. These materials are made available for you for the purposes of your participation in the electricity industry. If you have an interest in the electricity industry, you may view, download, copy, distribute, modify, transmit, publish, sell or create derivative works (in whatever format) from this document or in other cases use for personal academic or other non-commercial purposes. All copyright and other proprietary notices contained in the document must be retained on any copy you make.

All other rights of the copyright owner not expressly dealt with above are reserved.

No representation, warranty or guarantee is made that the information in this document is accurate or complete. While care is taken in the collection and provision of this information, ELEXON Limited shall not be liable for any errors, omissions, misstatements or mistakes in any information or damages resulting from the use of this information or action taken in reliance on it.

## AMENDMENT RECORD

Version	Date	Description of Changes	CRs Included	Mods Panel Ref
1.0	20/04/2009	First Published	P216	153/04

DRAFT

## CONTENTS

<b>1.7</b>	<b>Assistance with using the Procedure</b>	<b>7</b>
<b>1.8</b>	<b>Acronyms and Definitions</b>	<b>7</b>
1.8.1	Acronyms .....	7
1.8.2	Definitions.....	9
<b>2.</b>	<b>INTERFACE AND TIMETABLE INFORMATION.....</b>	<b>11</b>
<b>2.1</b>	<b>Methodology Review for Host LDSOs and Embedded LDSOs that do not Mirror</b>	<b>11</b>
<b>2.2</b>	<b>Methodology Review – Embedded LDSOs that Mirror</b>	<b>15</b>
<b>2.3</b>	<b>Annual Submission and Audit of Line Loss Factors (CVA and SVA) – Host LDSOs and Embedded LDSOs that do not Mirror</b>	<b>17</b>
<b>2.4</b>	<b>Annual Submission and Audit of LLFs – Embedded LDSOs that Mirror</b>	<b>24</b>
<b>2.5</b>	<b>Mid-year submission of new and revised LLFs</b>	<b>30</b>
<b>3.</b>	<b>SUPPORTING INFORMATION .....</b>	<b>32</b>
<b>3.1</b>	<b>LLF Methodology Principles</b>	<b>32</b>
<b>3.2</b>	<b>Guidelines for the approval of LLF Values</b>	<b>33</b>
<b>3.3</b>	<b>Use of Default Values</b>	<b>33</b>
<b>3.4</b>	<b>Recalculation of LLFs</b>	<b>34</b>
<b>3.5</b>	<b>LLF Calculation Audit Scope</b>	<b>36</b>
<b>3.6</b>	<b>Appendices</b>	<b>38</b>
	<b>Methodology Self Assessment Documents</b>	<b>38</b>
	<b>Calculation Self Assessment Documents</b>	<b>38</b>
	<b>LLF Submission forms</b>	<b>38</b>
	<b>SVA LLF Summary Report</b>	<b>38</b>
<b>1.</b>	<b>INTRODUCTION .....</b>	<b>665</b>
<b>1.1</b>	<b>Purpose</b>	<b>665</b>
<b>1.2</b>	<b>Main Users of the Procedure and their Responsibilities</b>	<b>665</b>
1.2.1	LLF Methodology Submission and Review .....	665
1.2.2	Approval of Methodology .....	776
1.2.3	LLF Submission and Calculation Audit.....	776
1.2.4	Approval of LLFs.....	776
1.2.5	Implementation of LLFs for use in Settlement.....	887
<b>1.3</b>	<b>Key Milestones</b>	<b>887</b>
<b>1.4</b>	<b>Balancing and Settlement Code Provision</b>	<b>887</b>
<b>1.5</b>	<b>Associated BSC Procedures</b>	<b>998</b>
<b>1.6</b>	<b>Use of the Procedure</b>	<b>998</b>
<b>1.7</b>	<b>Assistance with using the Procedure</b>	<b>998</b>
<b>1.8</b>	<b>Acronyms and Definitions</b>	<b>998</b>
1.8.1	Acronyms .....	998
1.8.2	Definitions.....	111110

<b>2.</b>	<b><u>INTERFACE AND TIMETABLE INFORMATION</u></b>	<b>131312</b>
<b>2.1</b>	<b><u>Methodology Review for Host LDSOs and Embedded LDSOs that do not Mirror</u></b>	<b>131312</b>
<b>2.2</b>	<b><u>Methodology Review – Embedded LDSOs that Mirror</u></b>	<b>171716</b>
<b>2.3</b>	<b><u>Annual Submission and Audit of Line Loss Factors (CVA and SVA) – Host LDSOs and Embedded LDSOs that do not Mirror</u></b>	<b>191918</b>
<b>2.4</b>	<b><u>Annual Submission and Audit of LLFs – Embedded LDSOs that Mirror Host or Embedded LDSOs that do not Mirror</u></b>	<b>262625</b>
<b>2.5</b>	<b><u>Mid-year submission of new and revised LLFs</u></b>	<b>323229</b>
<b>3.</b>	<b><u>SUPPORTING INFORMATION</u></b>	<b>343431</b>
<b>3.1</b>	<b><u>LLF Methodology Principles</u></b>	<b>343431</b>
<b>3.2</b>	<b><u>Guidelines for the approval of LLF Values</u></b>	<b>353532</b>
<b>3.3</b>	<b><u>Use of Default Values</u></b>	<b>353532</b>
<b>3.4</b>	<b><u>Recalculation of LLFs</u></b>	<b>363633</b>
<b>3.5</b>	<b><u>LLF Calculation Scope</u></b>	<b>383834</b>
<b>3.6</b>	<b><u>Appendices</u></b>	<b>404036</b>
	<b><u>Methodology Self Assessment Documents</u></b>	<b>404036</b>
	<b><u>Calculation Self Assessment Documents</u></b>	<b>404036</b>
	<b><u>LLF Submission forms</u></b>	<b>404036</b>
	<b><u>SVA LLF Summary Report</u></b>	<b>404036</b>
<b>1.</b>	<b><u>INTRODUCTION</u></b>	<b>5</b>
<b>1.1</b>	<b><u>Purpose</u></b>	<b>5</b>
<b>1.2</b>	<b><u>Main Users of the Procedure and their Responsibilities</u></b>	<b>5</b>
<b>1.2.1</b>	<b><u>LLF Methodology Submission and Review</u></b>	<b>5</b>
<b>1.2.2</b>	<b><u>Approval of Methodology</u></b>	<b>6</b>
<b>1.2.3</b>	<b><u>LLF Submission and Calculation Audit</u></b>	<b>6</b>
<b>1.2.4</b>	<b><u>Approval of LLFs</u></b>	<b>6</b>
<b>1.2.5</b>	<b><u>Implementation of LLFs for use in Settlement</u></b>	<b>7</b>
<b>1.3</b>	<b><u>Key Milestones</u></b>	<b>7</b>
<b>1.4</b>	<b><u>Balancing and Settlement Code Provision</u></b>	<b>7</b>
<b>1.5</b>	<b><u>Associated BSC Procedures</u></b>	<b>8</b>
<b>1.6</b>	<b><u>Use of the Procedure</u></b>	<b>8</b>
<b>1.7</b>	<b><u>Assistance with using the Procedure</u></b>	<b>8</b>
<b>1.8</b>	<b><u>Acronyms and Definitions</u></b>	<b>8</b>
<b>1.8.1</b>	<b><u>Acronyms</u></b>	<b>8</b>
<b>1.8.2</b>	<b><u>Definitions</u></b>	<b>10</b>
<b>2.</b>	<b><u>INTERFACE AND TIMETABLE INFORMATION</u></b>	<b>12</b>
<b>2.1</b>	<b><u>Methodology Review for Host LDSOs and Embedded LDSOs that do not Mirror</u></b>	<b>12</b>
<b>2.2</b>	<b><u>Methodology Review – Embedded LDSOs that Mirror</u></b>	<b>16</b>
<b>2.3</b>	<b><u>Annual Submission and Audit of Line Loss Factors (CVA and SVA) – Host LDSOs and Embedded LDSOs that do not Mirror</u></b>	<b>18</b>

<del>2.4</del>	<del>Annual Submission and Audit of LLFs — Embedded LDSOs that Mirror Host or Embedded LDSOs that do not Mirror</del>	<del>25</del>
<del>2.5</del>	<del>Mid-year submission of new and revised LLFs</del>	<del>30</del>
<del>3.</del>	<del>SUPPORTING INFORMATION .....</del>	<del>32</del>
<del>3.1</del>	<del>LLF Methodology Principles</del>	<del>32</del>
<del>3.2</del>	<del>Guidelines for the approval of LLF Values</del>	<del>33</del>
<del>3.3</del>	<del>Use of Default Values</del>	<del>33</del>
<del>3.4</del>	<del>Recalculation of LLFs</del>	<del>34</del>
<del>3.5</del>	<del>LLF Calculation Scope</del>	<del>35</del>
<del>3.6</del>	<del>Submission and Methodology Review timetable for the first year following Modification P216 implementation</del>	<del>36</del>
<del>3.7</del>	<del>Appendices</del>	<del>37</del>
	<del>Methodology Self Assessment Documents</del>	<del>37</del>
	<del>Calculation Self Assessment Documents</del>	<del>37</del>
	<del>LLF Submission forms</del>	<del>37</del>
	<del>SVA LLF Summary Report</del>	<del>37</del>

## **CP1326 will have no impact on sections 1.1 to section 1.6.**

### **1.7 Assistance with using the Procedure**

Where assistance is required in the use of this BSCP the user should, in the first instance, contact their BSC Change Administrator (BCA). Where queries cannot be answered by the BCA, contact should be made with the ~~BSCCo Helpdesk~~[BSC Service Desk](#).

### **1.8 Acronyms and Definitions**

#### **1.8.1 Acronyms**

BCA	Balancing and Settlement Code Change Administrator
BSCCo	BSC Company
BSCP	Balancing and Settlement Code Procedure
CMRS	Central Meter Registration Service
Code	Balancing and Settlement Code
CDCA	Central Data Collection Agency
CVA	Central Volume Allocation
CVA LLF(s)	CVA Line Loss Factor(s)
EFD	Effective From Date
GSP	Grid Supply Point
GSPG	Grid Supply Point Group
HHDA(s)	Half Hourly Data Aggregator(s)
Id	Identifier
LDSO	Licensed Distribution System Operator <sup>1</sup>
LLF	Line Loss Factor
LLFC Id(s)	Line Loss Factor Class Identifier(s)
LLFC(s)	Line Loss Factor Class (es)
MDD	Market Domain Data
MSID	Metering System Identifier
SMRS	Supplier Meter Registration Service

---

<sup>1</sup> This includes both Host LDSOs and Embedded LDSOs.

SVA	Supplier Volume Allocation
SVA LLF(s)	SVA Line Loss Factor(s)
SVAA	Supplier Volume Allocation Agent
WD	Working Day



## 1.8.2 Definitions

Full definitions of the above acronyms are, where appropriate, included in the Balancing and Settlement Code.

<b>Extra High Voltage (EHV)</b>	As defined in the Special Conditions of a distribution licence granted pursuant to section 6(1)(c) of the Electricity Act 1989.
<b>Embedded LDSO</b>	A LDSO operating an independent distribution network connected to a Host LDSO's distribution network <sup>2</sup> .  e.g. This includes both independent LDSOs; and Host LDSOs that are operating outside their geographical area.
<del>Generic</del> <b>Day</b> <u>(Generic)</u>	As defined in each Distribution System Operator's Methodology Statement.
<del>Generic</del> <b>LLF</b>	<del>The adjustment factor applied to the readings from a (group of) metering system(s) to adjust for losses on the distribution network and calculate the associated amount of energy at the GSP. Where the Line Loss Factor is calculated for a group of Metering Systems and the Line Loss Factor represents the average value of distribution losses for those Metering Systems.</del>
<del>Generic</del> <b>LLFC Group</b> <u>(Generic)</u>	A group of Line Loss Factor Classes that share the same generic set of Line Loss Factors.
<del>Generic</del> <b>Night</b> <u>(Generic)</u>	<del>As defined in each Distribution System Operator's Methodology Statement. Hours of the Settlement Day not covered by Generic Day.</del>
<b>Host LDSO</b>	A LDSO operating a distribution network that is directly connected to the Transmission System <u>in their own distribution licence area</u> .
<b>High Voltage (HV)</b>	As defined in the Special Conditions of a distribution licence granted pursuant to section 6(1)(c) of the Electricity Act 1989.
<b>Low Voltage (LV)</b>	As defined in the Special Conditions of a distribution licence granted pursuant to section 6(1)(c) of the Electricity Act 1989.
<b>Manifest error: Retrospective changes</b>	<u>An unambiguous error in the application of the approved methodology, in the calculation input data or corruption of the LLF values in the submission process in such a way that there is a material impact on Settlement or a material impact to the advantage or detriment of the customer.</u> <del>An error in the calculation or submission of Line Loss Factors that has a material impact on Settlement as determined by the Panel.</del>
<u><b>Material impact: Retrospective changes</b></u>	<u>An impact or estimated impact that has a value or estimated value of over £500.</u>
<b>Mirror/Mirroring</b>	Where the Embedded LDSO replicates the <u>Generic</u> Line Loss Factors of the relevant Host LDSO for their own specified LLFCs <u>for the GSP Group</u> .

<sup>2</sup> An Embedded LDSO may also operate an independent distribution network that is connected to Host LDSO's distribution network via another Embedded LDSO's network (known as a nested network). ~~Furthermore, an Embedded LDSO may also operate an independent distribution network that is connected to Transmission System within a Host LDSO's geographic distribution area.~~

<b>Non-Technical Losses</b>	Losses other than Technical Losses.
<b>Registrant</b>	See BSC Annex X-1
<b>Site Specific LLF</b>	Where the Line Loss Factor is calculated for an individual Metering System and represents distribution losses specific to Metered Volumes measured by that Metering System.
<b>Site Specific: Material Change</b>	A Material Change (that occurs mid year) to the physical plant, apparatus, or distribution network that causes a significant change to the Technical Losses specific to the Metered Volumes measured by the Metering System as determined by the Panel.
<b>Site Specific: Relevant Change</b>	A significant change to the physical plant, apparatus, distribution network, or capacity that causes a change to the Line Loss Factors. This is used to determine whether Site Specific LLFs shall be recalculated for the annual LLF submission.
<b>Technical Losses</b>	Technical Losses are losses caused by the intrinsic electrical characteristics internal to the power system and consist mainly of power dissipation in electrical system components such as transmission lines, power transformers and measurement systems.

## 2. INTERFACE AND TIMETABLE INFORMATION

### 2.1 Methodology Review for Host LDSOs and Embedded LDSOs that do not Mirror

~~To effectively review the high number of methodologies submitted in the first year this BSCP (i.e. 2009) will take effect, the timescales for submitting and reviewing the LLF methodology will differ from subsequent years. These differences are highlighted in the timetable below using footnotes 1 to 5. Submission dates and timescales for the first and subsequent years are summarised in Section 3.6.~~

REF.	WHEN	ACTION	FROM	TO	INFORMATION REQUIRED	METHOD
2.1.1	By 1 August <sup>3</sup> prior to the relevant BSC year	Submit proposed methodology and MSAD, or MSAD only where there has been no change since the methodology was last approved.	LDSO	BSCCo	MSAD and methodology or MSAD confirming continued use of approved methodology in accordance with Appendix 1.	Email or other electronic means
2.1.2	Within 2 WD of 2.1.1	Acknowledge receipt of methodology and MSAD, or confirmation that there has been no change since the methodology was last approved.  If the methodology has not changed, proceed to Ref (2.1.6) below.  Or if incomplete information has been received from LDSO contact LDSO to advise of any further information required; <u>or advise LDSO that no</u>	BSCCo	LDSO	Confirmation of receipt and notification of any initial concerns; <u>or notification of failure to submit methodology.</u>	Email, telephone or other electronic means

<sup>3</sup> ~~For the first methodology review following the implementation of Modification P216 on 20 April 2009, LLF methodologies will be submitted by 1 May 2009.~~

REF.	WHEN	ACTION	FROM	TO	INFORMATION REQUIRED	METHOD
		<u>methodology has been submitted.</u>				
2.1.3	Within 5WD of 2.1.1 <sup>4</sup>	Review methodology for compliance with the LLF Methodology Principles in accordance with Section 3.1 and provide draft report highlighting any non-compliance(s); <del>or advise LDSO that no methodology</del> or confirmation of continued use of approved methodology has been submitted.	BSCCo	LDSO	Methodology, MSAD, draft LDSO report, any non-compliances <del>or failure to submit methodology</del> or confirmation of continued use of approved methodology.	Email or other electronic means
2.1.4	Within 5WD of 2.1.3 <sup>5</sup>	Resolve any identified non-compliance(s) and submit updated methodology and MSAD; or submit methodology and MSAD if not submitted by deadline; or submit MSAD confirming continued use of existing approved methodology.	LDSO	BSCCo	MSAD, updated methodology, evidence of resolved non-compliance(s), methodology or MSAD confirming continued use of approved methodology.	Email, telephone or other electronic means
2.1.5	Within 15WD of 2.1.1 <sup>6</sup>	If non-compliance(s) have been identified, review submission in Ref (2.1.4).	BSCCo	LDSO	LDSO report.	Email, telephone or other electronic means

<sup>4</sup> For the first methodology review following the implementation of Modification P216 on 20 April 2009, BSCCo will have 20WD to provide a draft report.

<sup>5</sup> For the first methodology review following the implementation of Modification P216 on 20 April 2009, each LDSO will have 20WD to resolve non-compliances.

<sup>6</sup> For the first methodology review following the implementation of Modification P216 on 20 April 2009, BSCCo will have 55WD to provide the final report.

REF.	WHEN	ACTION	FROM	TO	INFORMATION REQUIRED	METHOD
		Provide report with confirmation of compliance or non-compliance.				
2.1.6	To meet Panel requirements	<p>Submit a final report to Panel stating:</p> <p>a) Recommendations for the approval of each methodology with no non-compliance(s) or corrected non-compliance(s); or</p> <p>b) Any continued non-compliance(s); or</p> <p>c) Any failures to submit methodology or confirmation of continued use of approved methodology.</p>	BSCCo	Panel	Final report.	Email or other electronic means
2.1.7	Within 1 WD of 2.1.6	<p>Review report submitted in Ref (2.1.6) and:</p> <p>Approve methodologies with no outstanding non-compliance(s); and</p> <p>Note any non-compliance(s); and</p> <p>Note any failures to submit a methodology or confirmation of continued use of existing approved methodology.</p>	Panel	BSCCo	Final report and Panel decision.	-

REF.	WHEN	ACTION	FROM	TO	INFORMATION REQUIRED	METHOD
2.1.8	Within 5 WD of 2.1.7	<p><del>Provide a report for</del><u>Notify</u> each LDSO stating whether the Panel:</p> <p>Approved the methodology; or</p> <p>Noted any non-compliance(s); or</p> <p>Noted the failure to submit a methodology; or</p> <p>Noted the failure to submit confirmation of continued use of existing approved methodology.</p>	BSCCo	LDSO	<del>Report</del> <u>Notification</u> detailing the Panel's decision.	Email or other electronic means
2.1.9	To meet PAB requirements	Provide report detailing non-compliance(s) or failures to submit a methodology or failure to confirm continued use of existing approved methodology.	BSCCo	PAB	Report detailing non-compliance(s) and failures.	Email or other electronic means

## 2.2 Methodology Review – Embedded LDSOs that Mirror

REF.	WHEN	ACTION	FROM	TO	INFORMATION REQUIRED	METHOD
2.2.1	By 1 August <sup>7</sup> prior to relevant BSC year	If Embedded LDSO Mirrors Host or Embedded LDSO LLFs, submit details of methodology (or methodologies) to Mirror.	Embedded LDSO	BSCCo	Confirmation of Mirroring Host or Embedded LDSO methodology and MSAD <del>(tailored for Embedded LDSOs that Mirror)</del> , in accordance with Appendix 2.	Email or other electronic means
2.2.2	Within 2 WD of 2.2.1	Acknowledge receipt of notification to Mirror.  Or where incomplete information received from Embedded LDSO contact Embedded LDSO to advise of any further information required.	BSCCo	Embedded LDSO	Confirmation of receipt and notification of any initial concerns.	Email, telephone or other electronic means
2.2.3	To meet Panel requirements	Submit a Panel paper stating:  a) The Embedded LDSO shall Mirror Host or Embedded LDSO methodology (or methodologies).  b) Any failures to submit notification to Mirror Host or Embedded LDSO methodology.	BSCCo	Panel	Report.	Email or other electronic means

<sup>7</sup> For the first methodology review following the implementation of Modification P216 on 20 April 2009, notification to Mirror Host LDSO LLFs (or LLFs submitted by Embedded LDSOs that do not Mirror) will be submitted by 1 May 2009.

REF.	WHEN	ACTION	FROM	TO	INFORMATION REQUIRED	METHOD
2.2.4	Within 1 WD of 2.2.3	<p>Review report submitted in Ref (2.2.3) and:</p> <p>Note any interaction with Host or Embedded LDSO Methodologies reviewed in 2.1.7 and any non-compliance(s); and</p> <p>Note any failures to notify BSCCo that the Embedded LDSO will Mirror Host or Embedded LDSO methodology (or methodologies).</p>	Panel	BSCCo	Report detailing Panel decision.	



### 2.3 Annual Submission and Audit of Line Loss Factors (CVA and SVA) – Host LDSOs and Embedded LDSOs that do not Mirror

REF.	WHEN <sup>8</sup>	ACTION	FROM	TO	INFORMATION REQUIRED	METHOD
2.3.1	By 1 September	If LLF methodology has been approved, propose dates to conduct a site visit <sup>9</sup> .  If LLF methodology has not been approved, agree site visit dates as soon as any outstanding non-compliance(s) have been resolved.	BSCCo	LDSO	Dates for site visit.	Email, telephone or other electronic means
2.3.2	By 10 September	Agree date for site visit as required. Where a date has not been agreed by this time BSCCo shall determine a suitable date for the site visit.	LDSO	BSCCo	Dates for site visit.	Email, telephone or other electronic means
2.3.3	By 30 September	Submit calculated LLFs <sup>10</sup> in accordance with the approved methodology and completed CSAD <sup>11</sup> signed by an authorised signatory.  Additionally, if there has been a change to a Line Loss Factor Class (LLFC) for an SVA submission then submit appropriate changes in accordance with BSCP509.	LDSO	BSCCo	CSAD (Appendix 3) signed by an authorised person in accordance with BSCP38 and:  a) If CVA Submission: CVA Long or Short Format data files, in accordance with Appendix 5; and/or  b) If SVA Submission: SVA Format data file (D0265) in accordance with Appendix 6 and information in accordance with BSCP509 if MDD changes are required.	Email or other electronic means

<sup>8</sup> Changes to the timescales set out below can be made at the discretion of BSCCo when CVA LLF approval is necessary in less than 40 WD before the Effective Date to carry out BM Unit Registrations and Registration transfers from SMRS to CMRS.

<sup>9</sup> A site visit may not be required if no LLFs have been re-calculated. Where a site visit is required the calculation audit will be conducted between 1 October and 30 November.

<sup>10</sup> Separate Site Specific LLFs for Import and Export Metering Systems may be applied in accordance with BSCP75.

<sup>11</sup> Please note that the CSAD covers both CVA and SVA LLFs.

REF.	WHEN <sup>8</sup>	ACTION	FROM	TO	INFORMATION REQUIRED	METHOD
2.3.4	Within 2 WD of 2.3.3	Acknowledge receipt of CSAD and LLFs and confirm authorised signature.	BSCCo	LDSO	Confirmation of receipt and authorised signature.	Email, telephone or other electronic means
2.3.5	Within <del>5</del> <u>10</u> WD of 2.3.3 <sup>12</sup>	Provide SVA LLF summary report to Host LDSOs and/or Embedded LDSOs that do not Mirror.	BSCCo	LDSO	Summary Report for SVA LLFs in accordance with Appendix 7.	Email or other electronic means
2.3.6	Within <del>7</del> <u>10</u> WD of 2.3.3	Publish submitted LLFs on the BSC website with a status of 'pending'.	BSCCo		SVA LLF Summary Report and: a) If CVA Submission: CDCA-I022 data files; and/or b) If SVA Submission: D0265 data files.	BSC Website
2.3.7	Between 1 October and <del>2030</del> November on date agreed in Ref (2.3.2) above	Conduct calculation audit in accordance with Section 3.5. <sup>13,14</sup>  If LLFs have been re-calculated conduct audit on LDSO site including spot checks on MSIDs. <sup>15</sup>	BSCCo		CSAD and: a) If CVA Submission: CDCA-I022 data file; and/or b) If SVA Submission: D0265 data file.	CSAD review, LLF validation system, site visits
2.3.8	Within 5 WD of calculation audit <sup>16</sup>	Provide draft audit report highlighting any identified non-compliance(s).	BSCCo	LDSO	Draft LDSO report.	Email or other electronic means
2.3.9	Within <del>10</del> <u>15</u> WD of <del>calculation audit</del> <u>2.3.8</u>	Resolve any non-compliance(s) identified in Ref (2.3.8) and notify BSCCo.	LDSO	BSCCo	Any further information required and evidence of resolved non-compliance(s).	Email, telephone or other electronic means

<sup>12</sup> If Host LDSO LLFs (or LLFs submitted by Embedded LDSOs that do not Mirror) have not been submitted by 30 September, provide summary report of LLFs after 5WD from the date of Host LDSO LLF submission (or LLF submission by Embedded LDSOs that do not Mirror).

<sup>13</sup> The calculation audit may involve further exchange of information between BSCCo and the LDSO to clarify, correct and re-audit any non-compliance(s). The LDSO shall use reasonable endeavours to provide any information requested by BSCCo. BSCCo will feed back to the LDSO the results of the review of the CSAD and the validation of the LLFs prior to site visit to enable the LDSO to address and identified non-compliances at an early stage. As part of the site visit BSCCo may also wish to target certain areas of the LDSO systems and processes to seek evidence on whether the LDSO has addressed these non-compliance(s).

<sup>14</sup> Where revised LLF values for existing sites have been submitted mid-year prior to commencement of the current submission cycle and are awaiting approval by the Panel, BSCCo shall include the LLF values in the calculation audit.

<sup>15</sup> Where LLFs have not been re-calculated, BSCCo may conduct a site visit when required.

<sup>16</sup> Where no site visit is required the calculation audit will be limited in scope.

REF.	WHEN <sup>8</sup>	ACTION	FROM	TO	INFORMATION REQUIRED	METHOD
2.3.10+ +	By <del>31</del> 10 December	Submit any revised LLFs to address any outstanding non-compliance(s).	LDSO	BSCCo	Any revised LLFs as required and final CSAD with evidence of resolved non-compliance(s).  Final CSAD signed by an authorised person in accordance with BSCP38 and:  a) If CVA re-submission: CVA Long or Short Format data files in accordance with Appendix 5; and/or  b) If SVA re-submission: SVA Format data file (D0265) in accordance with Appendix 6 and information in accordance with BSCP509 if MDD changes are required.	Email or other electronic means
<u>2.3.11</u>	<u>By 31 December</u>	<u>Conduct calculation audit on revised submission.</u>	<u>BSCCo</u>	<u>-</u>	<u>CSAD and:</u>  <u>a) If CVA Submission: CDCA-I022 data file; and/or</u>  <u>b) If SVA Submission: D0265 data file.</u>	<u>CSAD review, LLF validation system</u>
<u>2.3.12</u> <u>2.3.10</u>	<u>By 31 December</u> <del>Within 20 WD of 2.3.7</del>	Provide final audit report and confirmation of compliance or non-compliance.	BSCCo	LDSO	Final LDSO report.	Email, telephone or other electronic means.
<u>2.3.13</u> <u>2.3.12</u>	<u>By 31 December</u> <del>Within 5 WD of 2.3.11</del>	Publish revised LLFs on the BSC website with a status of 'pending'.	BSCCo		SVA LLF Summary Report and:  a) If CVA Submission: CDCA-I022 data files; and/or  b) If SVA Submission: D0265 data files.	BSC Website
<u>2.3.13</u>	<del>Within 515 WD of 2.3.1011</del>	<del>Conduct calculation audit on revised submission.</del>	<del>BSCCo</del>	<del>-</del>	<del>-</del>	<del>-</del>

REF.	WHEN <sup>8</sup>	ACTION	FROM	TO	INFORMATION REQUIRED	METHOD
<del>2.3.14</del>	<del>Within 5WD of 2.3.12</del>	<del>Provide audit report with confirmation of compliance/non-compliance.</del>	<del>BSCCo</del>	<del>LDSO</del>	<del>LDSO report.</del>	<del>Email or other electronic means</del>
<u>2.3.14</u> <u>2.3.15</u>	To meet Panel Requirements	Submit <u>a</u> final report specifying the LLFs for which the audit did not identify non-compliance(s) (including resolved non-compliance(s)) and the LLFs for which the audit identified non-compliance(s) including any default values requiring approval <sup>17</sup> .  Where MDD changes have been identified submit notice in accordance with BSCP509 that there has been (or is due to be) a change to MDD for Panel approval.	BSCCo	Panel	Final report, any default values and any MDD changes.	Email or other electronic means
<u>2.3.15</u> <u>2.3.16</u>	To meet Panel Requirements	Approve LLFs with no identified non-compliance(s) and note any non-compliant LLFs in Ref (2.3.15) above.  Approve default values for any non-compliant LLFs.	Panel	BSCCo	LLFs, Final report and any default values.	-
<u>2.3.16</u> <u>2.3.17</u>	Within 1 WD of <u>2.3.15</u> <del>2.3.16</del>	Notify Panel decision.	Panel	BSCCo	Panel decision.	-
<u>2.3.17</u> <u>2.3.18</u>	To meet PAB requirements	Provide a copy of the final report in Ref (2.3.15) giving details of any non-compliance(s).	BSCCo	PAB	Final report in Ref (2.3.15) with details of any non-compliance(s).	

<sup>17</sup> Where no methodology has been approved, default LLFs shall be presented to the Panel for approval.

REF.	WHEN <sup>8</sup>	ACTION	FROM	TO	INFORMATION REQUIRED	METHOD
<a href="#">2.3.18</a> <a href="#">2.3.19</a>	Within 2 WD of <a href="#">2.3.16</a> <a href="#">2.3.17</a>	Provide a final report for the LDSO stating whether the Panel:  Approved LLFs with no outstanding non-compliance(s); or  Noted any continued non-compliance(s) and approved default values.	BSCCo	LDSO	Final report detailing Panel approval of LLFs, <del>and</del> any default values <u>and any continued non-compliance(s).</u>	Email or other electronic means
<a href="#">2.3.19</a> <a href="#">2.3.20</a>	As agreed between BSCCo and the LDSO	If the Panel has noted any non-compliance(s), liaise with BSCCo to correct and re-submit LLFs. <sup>18</sup>	LDSO	BSCCo	Any revised LLFs as required and final CSAD with evidence of resolved non-compliance(s).	Email or other electronic means
<a href="#">2.3.20</a> <a href="#">2.3.21</a>	Within 2 WD of <a href="#">2.3.16</a> <a href="#">2.3.17</a>	Notify Parties of LLFs approved by the Panel.	BSCCo	Parties	LLFs approved by the Panel (including any default LLFs).	Email or other electronic means
<a href="#">2.3.21</a> <a href="#">2.3.22</a>	Within 2 WD of <a href="#">2.3.16</a> <a href="#">2.3.17</a>	Update LLFs on BSC Website to be utilised in Settlement, when either:  a) The Panel has approved the submission, update LLFs and EFD; or  b) If the Panel has approved default values, update LLFs to default values to be used in Settlement and EFD.  If SVA submission only proceed to Ref (2.3.27).  If both CVA and SVA submission then proceed from Ref (2.3.23) onwards.	BSCCo	-	Confirmation of Panel decision, LLFs and default values for non-approved LLFs.	Electronic means
<a href="#">2.3.22</a>	<a href="#">Within 5 WD of 2.3.21</a>	<a href="#">Obtain LLFs for the LLFCs from BSC Website.</a>	=	<a href="#">HHDAs/Suppliers</a>	<a href="#">D0265 data files.</a>	<a href="#">BSC Website</a>
<a href="#">2.3.23</a>	<a href="#">Within 10 WD of 2.3.22</a>	<a href="#">HHDAs and Suppliers implement into systems.</a>	<a href="#">HHDAs/Suppliers</a>	=	<a href="#">D0265 data files.</a>	=

<sup>18</sup> As appropriate, BSCCo shall present the corrected LLFs to Panel for approval and inform PAB of the Panel outcome.

REF.	WHEN <sup>8</sup>	ACTION	FROM	TO	INFORMATION REQUIRED	METHOD
<u>2.3.24</u> <u>2.3.23</u>	<del>Within 2 WD of</del> <u>2.3.17</u> By 10 March	Provide CDCA with CVA LLFs for use in Settlement:  a) If the Panel has approved the CVA LLF submission, provide CVA LLFs and EFD; or  b) If the Panel has approved default values, provide default CVA LLF values and EFD.	BSCCo	CDCA	Confirmation of approval of CVA LLFs and EFD contained in CDCA-I022 data files; or  CVA Metering System ID, CDCA-I022 data files and EFD.	Email or other electronic means
<u>2.3.25</u> <u>2.3.24</u>	Within <u>12</u> WD of <u>2.3.24</u> <del>2.3.23</del>	Acknowledge receipt of CVA LLFs and notify BSCCo of any exceptions via the CDCA-I023 data file.	CDCA	BSCCo	CDCA-I023 data file.	Email or other electronic means
<u>2.3.26</u> <u>2.3.25</u>	Within a timescale agreed between CDCA and BSCCo	Implement approved CVA LLFs in accordance with CDCA-I022 data files supplied in Ref (2.3.24 <del>3</del> ) above into CDCA systems.	CDCA	-	CDCA-I022 data files.	-
<u>2.3.27</u> <u>2.3.26</u>	Within 1 WD of <u>2.3.26</u> <del>2.3.25</del>	Notify BSCCo of successful CDCA-I022 load.	CDCA	BSCCo	-	Email or other electronic means
<u>2.3.28</u> <u>2.3.27</u>	<del>Within 2 WD of</del> <u>2.3.17</u> By 10 March	Provide SVAA with SVA LLFs for use in Settlement:  a) If the Panel has approved the SVA LLF submission, provide SVA LLFs and EFD; or  b) If the Panel has approved default values, provide default SVA LLF values and EFD.	BSCCo	SVAA	Confirmation of approval of SVA LLFs and EFD contained in D0265 data files; or  D0265 data files, default values and EFD.	Email or other electronic means
<u>2.3.29</u> <u>2.3.28</u>	Within <u>12</u> WD of <u>2.3.28</u> <del>2.4.27</del>	Acknowledge receipt of SVA LLFs.	SVAA	BSCCo	-	Email or other electronic means

REF.	WHEN <sup>8</sup>	ACTION	FROM	TO	INFORMATION REQUIRED	METHOD
<u>2.3.30</u> <del>2.3.29</del>	Within a timescale agreed between SVAA and BSCCo	Implement approved SVA LLFs in accordance with D0265 data files supplied in Ref (2.3.2 <del>87</del> ) above into SVAA systems.	SVAA		D0265 data files.	Email or other electronic means
<u>2.3.31</u> <del>2.3.30</del>	Within 1 WD of <u>2.3.30</u> <del>2.3.29</del>	Notify BSCCo of successful D0265 data file load.	SVAA	BSCCo	-	Email or other electronic means
<del>2.3.31</del>	<del>Within 6 WD of 2.3.30</del>	<del>Obtain LLFs for the LLFCs from BSC Website.</del>	-	<del>HHDAs/Suppliers</del>	<del>D0265 data files.</del>	<del>BSC Website</del>
<del>2.3.32</del>	<del>Within 5 WD of 2.3.31</del>	<del>HHDAs and Suppliers implement into systems.</del>	<del>HHDAs/Suppliers</del>	-	<del>D0265 data files.</del>	-

## 2.4 Annual Submission and Audit of LLFs – Embedded LDSOs that Mirror ~~Host or Embedded LDSOs that do not Mirror~~

REF.	WHEN	ACTION	FROM	TO	INFORMATION REQUIRED	METHOD
2.4.1	By 1 September	If LLF methodology has been approved, propose suitable dates to conduct site visit <sup>1920</sup> .  If LLF methodology has not been approved, agree site visit dates as soon as any outstanding non-compliance(s) have been resolved.	BSCCo	Embedded LDSO	Dates for site visit.	Email, telephone or other electronic means
2.4.2	By 10 September	Agree date for site visit as required. Where a date has not been agreed by this time BSCCo shall determine a suitable date for the site visit.	Embedded LDSO	BSCCo	Dates for site visit.	Email, telephone or other electronic means
<u>2.4.3</u>	<u>Between 1 November and 30 November on date agreed in Ref (2.4.2) above.</u>	<u>Check a representative sample of Metering Systems are assigned to the correct LLFC.</u>	<u>BSCCo</u>	<u>=</u>	<u>MSAD</u>	<u>Site visit</u>

<sup>19</sup> A representative sample of Metering Systems will be checked for the correct LLFC on the Embedded LDSO site visit.

<sup>20</sup> A site visit may not be required if no LLFs have been re-calculated. Where a site visit is required the calculation audit will be conducted between 1 October and 30 November.



REF.	WHEN	ACTION	FROM	TO	INFORMATION REQUIRED	METHOD
<u>2.4.4</u>	<u>Within 5WD of 2.4.3</u>	<u>Provide Metering System sample report highlighting any non-compliance(s).</u>	<u>BSCCo</u>	<u>Embedded LDSO</u>	<u>Metering System sample report.</u>	<u>Email or other electronic means</u>
<u>2.4.5</u>	<u>By 31 December</u>	<u>Resolve any identified non-compliance(s) in Ref (2.4.4) and notify BSCCo.</u>	<u>Embedded LDSO</u>	<u>BSCCo</u>	<u>Any further information required and evidence of resolved non-compliance(s).</u>	<u>Email, telephone or other electronic means</u>
<u>2.4.3</u>	<u>By 30 September + 7 WD</u>	<u>Obtain LLFs submitted by the relevant Host LDSO(s) or Embedded LDSOs that do not Mirror.</u>	<u>Embedded LDSO</u>		<u>LDSO's submitted LLFs.</u>	<u>BSC Website or Host LDSO or Embedded LDSO that does not Mirror</u>
<u>2.4.64</u>	<u>By 31 December + 10WD 31 October</u>	<u>Obtain LLFs submitted by the relevant Host LDSO(s) or Embedded LDSOs that do not Mirror; and</u> <u>Submit LLFs<sup>21</sup> and CSAD in accordance with approved Host LDSO or Embedded LDSO methodology.</u>	Embedded LDSO	BSCCo	<u>LDSO's submitted LLFs; and</u> CSAD for Embedded LDSOs that Mirror in accordance with Appendix 4, signed by an authorised person in accordance with BSCP38; and a) If CVA Submission: CVA Long or Short Format data files in accordance with Appendix 5; and/or b) If SVA Submission: SVA Format data file (D0265) in accordance with Appendix 6 and information in accordance with BSCP509 if MDD changes are required.	<u>BSC Website or Host LDSO or Embedded LDSO that does not Mirror</u>  Email or other electronic means

<sup>21</sup> Separate Site Specific LLFs for Import and Export Metering Systems may be applied in accordance with BSCP75.

REF.	WHEN	ACTION	FROM	TO	INFORMATION REQUIRED	METHOD
2.4. <del>75</del>	Within 2 WD of <del>2.4.6</del> 2.4.4	Acknowledge receipt of CSAD and LLFs and confirm authorised signature.	BSCCo	Embedded LDSO	Confirmation of receipt and authorised signature.	-
<del>2.4.6</del>	<del>Between 1 November and 30 November on date agreed in Ref (2.4.2) above.</del>	<del>Conduct calculation audit<sup>22</sup>. If LLFs have been re-calculated conduct audit on LDSO site including spot checks on MSIDs.</del>	<del>BSCCo</del>	-	<del>CSAD and: (a) If CVA submission: CVA Long or Short Format data files; and/or (b) If SVA submission: D0265 data files.</del>	<del>LLF validation system; site visits</del>
<u>2.4.8</u>	<u>Within 4WD of 2.4.6</u>	<u>Conduct LLF Calculation Audit<sup>23</sup></u>	<u>BSCCo</u>	=	<u>CSAD and: (a) If CVA submission: CVA Long or Short Format data files or other format agreed with BSCCo; and/or (b) If SVA submission: D0265 data files or other format agreed with BSCCo.</u>	<u>LLF Validation System, Host LDSO LLF submissions</u>
<del>2.4.9</del> <u>2.4.7</u>	Within <u>6</u> WD of <del>2.4.6</del> <u>calculation audit</u> <sup>24</sup>	Provide draft audit report highlighting any non-compliance(s).	BSCCo	Embedded LDSO	Draft LDSO report.	Email or other electronic means

<sup>22</sup> This calculation audit will be dependent on the results of the Host LDSO's calculation audit (or calculation audit for Embedded LDSOs that do not Mirror). BSCCo will feed back to the LDSO the results of the review of the CSAD and the validation of the LLFs prior to site visit to enable the LDSO to address and identified non-compliances at an early stage. As part of the site visit BSCCo may also wish to target certain areas of the LDSO systems and processes to seek evidence on whether the LDSO has addressed these non-compliances.

<sup>23</sup> Where no site visit is required the calculation audit will be limited in scope.

<sup>24</sup> Where no site visit is required the calculation audit will be limited in scope.

REF.	WHEN	ACTION	FROM	TO	INFORMATION REQUIRED	METHOD
<del>2.4.10</del> 2.4.8	Within <del>10</del> 5WD of <del>2.4.9</del> 2.4.7	Resolve any identified non-compliance(s) in Ref (2.4. <del>9</del> 7) and notify BSCCo.	Embedded LDSO	BSCCo	Any further information required and evidence of resolved non-compliance(s).	Email, telephone or other electronic means
<del>2.4.8</del>	<del>Within 5WD of 2.4.8</del>	<del>Produce final audit report and confirmation of compliance or non-compliance.</del>	<del>BSCCo</del>	<del>Embedded LDSO</del>	<del>Final LDSO report.</del>	<del>Email or other electronic means</del>
<del>2.4.9</del>	<del>By 31 December + 5WD</del>	<del>Notify Embedded LDSO that revised LLFs have been submitted by the relevant Host or Embedded LDSOs that do not Mirror.</del>	<del>BSCCo</del>	<del>Embedded LDSO</del>	<del>Notification of revised values received</del>	<del>Email or other electronic means</del>
2.4.10	Within 5WD of 2.4.10	Obtain LLFs submitted by the relevant Host LDSO(s) or Embedded LDSO(s) that do not Mirror.	Embedded LDSO		LDSO's revised LLFs.	BSC Website or Host LDSO or Embedded LDSO that does not Mirror

REF.	WHEN	ACTION	FROM	TO	INFORMATION REQUIRED	METHOD
2.4.11	<del>Within 5WD of 2.4.11</del> <u>At same time as 2.4.10</u>	Submit any revised LLFs to address any outstanding non-compliance(s).	Embedded LDSO	BSCCo	Any revised LLFs as required and final CSAD with evidence of resolved non-compliance(s).  Final CSAD signed by an authorised person in accordance with BSCP38 and:  a) If CVA re-submission: CVA Long or Short Format data files in accordance with Appendix 5; and/or  b) If SVA re-submission: SVA Format data file (D0265) and information in accordance with BSCP509 if MDD changes are required.	Email or other electronic means
2.4.12	Within <del>45</del> WD of <del>2.4.12</del> <u>2.4.10</u>	Conduct calculation audit on revised submission.  <del>Proceed to Section 2.3 of this BSCP and continue onwards from Ref (2.3.12) to complete the submission and audit process.</del>	BSCCo	-	-	CSAD review, LLF validation system, <del>and</del> <u>site visits</u>

REF.	WHEN	ACTION	FROM	TO	INFORMATION REQUIRED	METHOD
<u>2.4.13</u>	<u>Within 6WD of 2.4.10</u>	<u>Produce final audit report and confirmation of compliance or non-compliance.</u>  <u>Proceed to Section 2.3 of this BSCP and continue onwards from Ref (2.3.142.3.12) to complete the submission and audit process.</u>	<u>BSCCo</u>	<u>Embedded LDSO</u>	<u>Final LDSO report.</u>	<u>Email or other electronic means</u>

## 2.5 Mid-year submission of new and revised LLFs<sup>25</sup>

REF.	WHEN <sup>26</sup>	ACTION	FROM	TO	INFORMATION REQUIRED	METHOD
2.5.1	>= EFD-50 WD if mid-year submission for new site; or >=EFD-40 WD if mid-year submission of revised LLFs for an existing site	Submit calculated LLFs in accordance with the approved methodology and completed CSAD <sup>27</sup> signed by an authorised signatory.	LDSO	BSCCo	CSAD signed by an authorised person in accordance with BSCP38; and  a) If CVA Submission: CVA Long or Short Format data files in accordance with Appendix 5; and/or  b) If SVA Submission: SVA Format data file (D0265) and information in accordance with BSCP509 if MDD changes are required	Email or other electronic means
2.5.2	Within 2 WD of 2.5.1	Acknowledge receipt of CSAD and LLFs and confirm authorised signature.	BSCCo	LDSO	Confirmation of receipt and authorised signature.	Email or telephone
2.5.3	Within 5 WD of 2.5.1	Conduct calculation audit. <sup>28,29</sup>	BSCCo		CSAD and  a) If CVA submission: CVA Long or Short Format data files; and/or  b) If SVA submission: D0265 data files.	LLF validation system, site visits

<sup>25</sup> Mid year submission of revised LLFs are subject to the criteria defined in the LLF Methodology Principles 14, 15 and 16, see Appendix 3.1.

<sup>26</sup> Changes to the timescales set out below can be made at the discretion of BSCCo when CVA LLF approval is necessary in less than 40 WD before the Effective Date to carry out BM Unit Registrations and Registration transfers from SMRS to CMRS.

<sup>27</sup> Please note that the CSAD covers both CVA and SVA LLFs.

<sup>28</sup> The calculation audit may involve further exchange of information between BSCCo and the LDSO to clarify, correct and re-audit any non-compliances. The LDSO shall use reasonable endeavours to provide any information requested by BSCCo. BSCCo will feedback to the LDSO the results of the review of the CSAD and the validation of the LLFs prior to site visit to enable the LDSO to address and identified non-compliances at an early stage. As part of the site visit BSCCo may also wish to target certain areas of the LDSO systems and processes to seek evidence on whether the LDSO has addressed these non-compliances.

<sup>29</sup> Where no site visit is required the calculation audit will be limited in scope.

---

REF.	WHEN <sup>26</sup>	ACTION	FROM	TO	INFORMATION REQUIRED	METHOD
2.5.4	Within 5 WD of 2.5.3	Produce final report and confirmation of compliance or non-compliance.  Proceed to Ref (2.3.15).	BSCCo	LDSO	Final Report.	Email or other electronic means

### 3. SUPPORTING INFORMATION

#### 3.1 LLF Methodology Principles

All LLF methodologies are required to comply with the Principles described below:

1. LLFs shall be calculated using a generic (non Site Specific) method except for:
  - (a) Sites that are connected at Extra High Voltage (EHV); or
  - (b) Where the customer has requested a Site Specific LLF, and the LDSO is in agreement.
2. All LLFs shall be calculated to at least 3 decimal places and submitted to 3 decimal places.
3. All Site Specific LLFs shall account for Technical Losses only.
4. All Generic LLFs shall account for all losses (Technical and Non Technical).
5. Site Specific ~~LLF values~~ losses and the total Grid Supply Point Group (GSPG) losses shall be considered in the calculation of Generic LLFs.<sup>30</sup>
6. Non-EHV Generic LLFs ~~values~~ for Import and Export at the same site where the voltage level is the same shall have the same values.
7. There shall be no more than 2 Low Voltage (LV) and 2 High Voltage (HV) Generic LLFC Groups, in each GSPG, and at least 1 Generic EHV LLFC Group.
8. As a minimum, Generic LLFs shall be calculated separately for Day and ~~n~~Night.
9. LDSOs shall utilise Settlement data from a Settlement Run at R~~32~~ or greater and from a complete 12-month period, for calculating Generic LLFs. The 12-month period to be used shall be ~~determined by the Panel after the first year~~ the BSC Year<sup>31</sup> 3 years prior to the BSC Year for which the LLFs are being calculated.
10. Adjustments to calculation or application of LLFs, to take into account historic market wide issues noted in the BSC Auditor's latest Report, can only be made if agreed to be appropriate by the Panel.
11. Robust error detection and correction processes shall be in place throughout the calculation and submission of LLFs.
12. All Generic LLFs shall be re-calculated at least every 2 years.
13. All Site Specific LLFs shall be re-calculated when there has been a relevant change to the site or network, and at least every 5 years.<sup>32</sup>

---

<sup>30</sup> ~~For the avoidance of doubt, t~~This principle allows Site Specific Losses to be calculated individually or in aggregate and then used in the calculation of Generic LLFs.

<sup>31</sup> ~~For the avoidance of doubt, t~~This principle only applies to the calculation of Generic LLFs. The BSC Year is 1 April to 31 March. LLFs for use in the BSC Year commencing 1 April 2011 should be calculated using the Settlement Data from the 2008 BSC Year, 1 April 2008 to 31 March 2009.

<sup>32</sup> Appendix 3.4 provides clarification on how this should be implemented.



14. No changes shall be made to approved Generic ~~LLFCs-LLFss-values~~ mid year. Annual updates will have an effective from date of 1 April. Where default LLFs have been applied due to an audit failure, these may be ~~updated to thereplaced~~ with approved LLFs on a prospective basis as determined when the LLFs resubmitted by the LDSO have been approved by the Panel.

15. No retrospective changes shall be made to approved Site Specific or Generic LLFs other than to correct material manifest errors.

16. Changes shall only be made to approved Site Specific LLFs mid year if: there has been a material change affecting the site; and the revised LLFs have been approved by the Panel. Annual updates will have an effective from date of 1 April. Where default LLFs have been applied due to an audit failure, these may be updated to the approved LLFs on a prospective basis as determined from time to time by the Panel.

~~(a) There has been a material change affecting the site; and~~

~~(b) The revised LLFs have been approved by the Panel.~~

~~Annual updates will have an effective from date of 1 April. Where default LLFs have been applied due to an audit failure, these may be updated to the approved LLFs on a prospective basis as determined from time to time by the Panel.~~

### 3.2 Guidelines for the approval of LLF Values

The BSCCo will employ the following guidelines in its submission of LLFs to the Panel for approval:

- (a) The methodology employed by the LDSO has been approved;
- (b) The LLF values have been calculated in accordance with the approved methodology;
- (c) The LLF values have been audited and any outstanding non-compliance(s) have been resolved; and
- (d) Where appropriate, default LLF values are provided in accordance with Section 3.3 below.

LLF values that fail any part of the audit shall not be approved.

### 3.3 Use of Default Values

For all non-approved Site Specific LLFs and Generic LLFs ~~sC-Groups~~ default values shall be applied in the order of precedence below ~~as follows~~:

- (a) ~~For all non-approved LLFs, t~~ The default values shall be the last approved LLFs ~~values~~;

- (b) Where there are no previously approved Site Specific LLFs, the default values shall be ~~from~~ the approved Generic LLFC Group LLFs for the equivalent voltage level;
- (c) Where there are no previously approved Generic LLFs, the default values shall be set to 1.000 (unity);

~~(d)~~ Default values shall continue to apply until such time as the LDSO submits a set of LLFs which are approved by the Panel, whereupon the new approved LLFs shall be applied on a prospective basis only;

~~(e)~~ For existing Site Specific LLFs or a Generic LLFC Group the previously approved LLFs shall continue to apply until such time as the LDSO submits a new set of LLFs which are approved by the Panel, whereupon the new approved LLFs shall be applied on a prospective basis only.

The default LLFs are applied on an equivalent day for day basis, for example, the previously approved LLFs for 1<sup>st</sup> January will be the default LLFs for the next 1<sup>st</sup> January. Where default LLFs have to be applied to 29<sup>th</sup> February, the previously approved LLFs for 28<sup>th</sup> February will be used;

~~(f)~~ On occasions when winter/summer or summer/winter clock changes become involved:

- (i) If the day on which default LLFs are to be applied is a clock change day, the set of LLFs approved for the corresponding clock change day in previous year shall be used; or
- (ii) If, when attempting to apply a default value, the corresponding day in the previous year is found to be a clock change day, the LLFs approved for the day immediately after that clock change day shall be used;

~~(g)~~ If, after attempting to apply the rules in (b) to (c), there is no data available from the corresponding Settlement Period in the previous year, a default LLF of 1.000 shall be applied.

In each instance, the default LLFs shall only be replaced by approved LLFs notified in accordance with Section 2.3.21.

### 3.4 Recalculation of LLFs

The LDSO shall employ the following guidelines when recalculating LLFs:

- (a) Site Specific LLFs which have been recalculated in the last 5 years, will only need to be recalculated when this 5 years is complete, even if the last recalculation was completed before ~~the implementation of Modification P216 on~~ 20 April 2009;
- (b) Site Specific LLFs which have not been recalculated in the last 5 years prior to ~~the implementation of Modification P216 on~~ 20 April 2009, will need to be recalculated for the second LLF submission following this date;

(c) New Site Specific LLFs (for new sites, or sites that have moved to Site Specific LLFs as a result of Principle 1) must be calculated for the first LLF submission following ~~the implementation of Modification P216 on~~ 20 April 2009; and

~~(d) Generic LLFs must be recalculated for the first LLF submission, following the implementation of Modification P216 on 20 April 2009.~~

### 3.5 LLF Calculation Audit Scope

The LLF Calculation audit<sup>33</sup> covers the checks outlined below:

1. Confirm all LLFs submitted have effective from dates of 1 April;
2. Confirm that CVA and SVA LLFs were submitted by a Category X Signatory;
3. Confirm all LLFs submitted are calculated to at least 3 decimal places and submitted to 3 decimal places (as per Principle 2);
4. Confirm data files are in the correct formats:
  - (a) For CVA LLFs, confirm that the long and/or short format files are in accordance with the format defined in Appendix 5~~;~~
  - (b) For SVA LLFs, confirm that the D0265 file is in accordance with the format defined in the Data Transfer Catalogue (DTC) in Appendix 6~~;~~
5. Confirm that the number of Settlement Periods for each Settlement Date matches the number of LLFs submitted for that date;
6. Confirm that all SVA LLFC IDs submitted are entered in MDD or an application has been made to do so and that LLFs have been submitted for all LLFCs contained in MDD;
7. Conduct a validation check, which will pick out<sup>34</sup>:
  - (a) All SVA LLFs which are ~~<0.750000~~ or ~~>1.250~~~~;~~
  - (b) All CVA LLFs which are ~~<0.750000~~ or ~~>1.250999~~~~;~~
  - (c) All revised SVA LLFs which are outside a range specified as:  
 $\{\text{last year's LLF minus 20\% of last year's loss}^{35}\}$  to  $\{\text{last year's LLF plus 20\% of last year's loss}\}$ ;

Examples:

- i) if last year's LLF was 1.050, the valid range for this year would be 1.040 – 1.060; and
- ii) if last year's LLF was 0.950, the valid range for this year would be 0.940 – 0.960~~;~~
- (d) All revised CVA LLFs which are outside a range specified as:  
 $\{\text{last year's LLF minus 50\% of last year's loss}^{36}\}$  to  $\{\text{last year's LLF plus 100\% of last year's loss}\}$ ;

---

<sup>33</sup> BSCCo will use a LLF validation system to conduct a number of the validation checks as outlined in this section.

<sup>34</sup> For checks 7(a) to 7(e) BSCCo shall compare the value submitted by the LDSO with a previous factor for a similar time period.

<sup>35</sup> The loss refers to the proportion of energy lost as a result of electricity flowing through the Distribution System.

Examples:

i) if last year's LLF was 1.050, the valid range for this year would be 1.025 – 1.100; and

ii) if last year's LLF was 0.950, the valid range for this year would be 0.900 – 0.975.

(e) All sites with new CVA or SVA Site Specific LLFs (that were not included in last year's submission).

8. Check a representative sample of LLFs to confirm that they have been calculated in accordance with the audited methodology. This check will be performed at the LDSO's offices<sup>37</sup>, and will include discussions with the LDSO and consideration of the audit trail.

9. Check a representative sample of Metering Systems to confirm that the correct LLFC has been applied. This check will be performed at the LDSO's offices. For clarity, this check will look at the application of an LLFC to Metering Systems during the last year.

### ~~3.6 Submission and Methodology Review timetable for the first year following Modification P216 implementation~~

~~Differences in submission dates and timescales for the first year are summarised in the table below:~~

<del>Date (First Year)</del>	<del>Date (Subsequent Years)</del>	<del>Action</del>
<del>By 1 May 2009</del>	<del>By 1 August</del>	<del>Submit methodologies and MSADs to BSCCo.</del>
<del>By 1 August 2009</del>	<del>By 1 September</del>	<del>Complete methodology review.</del>
<del>20 WD</del>	<del>5 WD</del>	<del>Provide draft LDSO reports.</del>
<del>20 WD</del>	<del>5 WD</del>	<del>Resolve any identified non-compliance(s).</del>
<del>15 WD</del>	<del>5 WD</del>	<del>Provide final LDSO reports.</del>

<sup>36</sup> The loss refers to the proportion of energy lost as a result of electricity flowing through the Distribution System.

<sup>37</sup> An Embedded LDSO that mirrors LLFs calculated by the relevant Host LDSO will not require a site visit as no calculation has been performed. The calculation audit for Embedded LDSOs that Mirror LLFs will check a representative sample of LLFs to confirm that the LLFs have been Mirrored correctly.

### **3.73.6 Appendices**

#### **Methodology Self Assessment Documents**

Appendix 1: Methodology Self-Assessment Document (MSAD) for Host LDSOs and Embedded LDSOs that do not Mirror.

Appendix 2: Methodology Self-Assessment Document (MSAD) for Embedded LDSOs that Mirror.

#### **Calculation Self Assessment Documents**

Appendix 3: Calculation Self-Assessment Document (CSAD) for Host LDSOs and Embedded LDSOs that do not Mirror.

Appendix 4: Calculation Self-Assessment Document (CSAD) for Embedded LDSOs that Mirror.

#### **LLF Submission forms**

Appendix 5: CVA Long and Short Format data files.

Appendix 6: SVA Format data file (D0265).

#### **SVA LLF Summary Report**

Appendix 7: SVA Summary Report.