BSC Procedure 128 relating to 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 13.0, relating to Production, Submission, Audit and Approval of Line Loss Factors.

3. This BSC Procedure is effective from 22 September 2025.

4. This BSC Procedure has been approved by the ~~Panel.~~BSCCo

© Elexon Limited 2025

OFFICIAL

CONTENTS

1. INTRODUCTION 3

1.1 Purpose 3

1.2 Main Users of the Procedure and their Responsibilities 3

1.3 Key Milestones 5

1.4 Balancing and Settlement Code Provision 6

1.5 Associated BSC Procedures 6

1.6 Use of the Procedure 7~~6~~

1.7 Assistance with using the Procedure 7

1.8 Acronyms and Definitions 8

2. INTERFACE AND TIMETABLE INFORMATION 11

2.1 Methodology Review for Host LDSOs and Embedded LDSOs that do not Mirror 11

2.2 Methodology Review – Embedded LDSOs that Mirror 14

2.3 Annual Submission and Audit of Line Loss Factors (CVA and SVA) – Host LDSOs and Embedded LDSOs that do not Mirror 16

2.4 Annual Submission and Audit of LLFs – Embedded LDSOs that Mirror 27~~26~~

2.5 Mid-year submission of new and revised LLFs 32~~30~~

3. SUPPORTING INFORMATION ..... 34~~32~~

3.1 LLF Methodology Principles 34~~32~~

3.2 Guidelines for the approval of LLF Values 35~~33~~

3.3 Use of Default Values 36~~34~~

3.4 Recalculation of LLFs 36~~34~~

3.5 LLF Calculation Audit Scope 37~~35~~

3.6 Appendices 40~~38~~

AMENDMENT RECORD – BSCP128 ..... 41~~38~~

© Elexon Limited 2025

1. INTRODUCTION

1.1 [Code Reform]Purpose

This BSC Procedure (BSCP) defines the procedure by which Line Loss Factor (LLF) methodologies submitted by Licensed Distribution System Operators (LDSOs, including Host LDSOs and Embedded LDSOs) are reviewed by BSCCo, presented to the ~~Panel~~ relevant Code Committees for recommendation to BSCCo for decision ~~approval~~ and, where appropriate, reported to the Performance Assurance Board (PAB).

It also defines the procedure by which LLF values submitted by LDSOs are audited by BSCCo, presented to the ~~Panel~~ relevant Code Committees for recommendation to BSCCo for BSCCo decision ~~approval~~ and provided to the Central Data Collection Agent (CDCA) or the Supplier Volume Allocation Agent (SVAA) for use in Settlement (they are also made available to Half Hourly Data Aggregators (HHDAs) for use in Settlement). The results of this audit are reported to the PAB.

This BSCP also describes the key interfaces and timetable and responsibilities for the main parties involved.

This BSCP128 supersedes BSCP28 (Approval and Notification of CVA Line Loss Factors) and BSCP528 (SVA Line Loss Factors for Half Hourly and Non Half Hourly Metering Systems registered in SMRS).

1.2 [Code Reform]Main Users of the Procedure and their Responsibilities

The main users of this procedure are summarised in the table below:

Central Volume Allocation (CVA) Metering Systems	Supplier Volume Allocation (SVA) Metering Systems
BSCCo	BSCCo
LDSO	LDSO
Registrant	SVAA
CDCA	Suppliers
~~Panel~~BSCCo	HHDAs
	~~Panel~~BSCCo

Each LDSO shall obtain approval for CVA and SVA LLFs applicable to Metering Systems registered in the CMRS and SMRS respectively. The stages for obtaining approval are outlined below:

© Elexon Limited 2025

1.2.1 LLF Methodology Submission and Review

Each Host LDSO and Embedded LDSO that does not Mirror shall prepare and submit a methodology for calculating LLFs that complies with the LLF Methodology Principles in accordance with Section 3.1, along with the Methodology Self-assessment Document (MSAD, Appendix 1 providing evidence of compliance (or non-compliance).

Each Embedded LDSO that Mirrors the methodology of a Host LDSO or Mirrors the methodology on an Embedded LDSO that does not Mirror, must provide BSCCo with the details of each methodology that they intend to Mirror. [H/K]Additionally, they must include any information requested by BSCCo. The Embedded LDSO that Mirrors will submit this information within the MSAD (Appendix 2), which is tailored specifically for Embedded LDSOs that Mirror.

BSCCo shall review each methodology against the LLF Methodology Principles and will liaise with the relevant LDSO so that during this process, the LDSO can correct and BSCCo re-review any non-compliances.~~, before the final report is issued to the Panel~~.

1.2.2 Approval of Methodology

BSCCo shall report the results of the review to the ~~Panel~~ relevant Code Committees who shall ~~and~~ recommend the approval of each compliant methodology. The relevant Code Committees ~~Panel~~ shall ~~-~~ recommend to BSCCo for approval~~approve~~ the compliant methodologies and note any non-compliances. BSCCo shall report any non-compliance(s) to PAB who shall manage the identified non-compliances, existing at the end of the methodology review, in line with the current Risk Operating Plan (ROP). BSCCo shall report the outcome of ~~the~~their decisions regarding the submitted methodologies ~~Panel meeting~~ to the LDSO. Once a methodology has been approved subsequent reviews will only take place if the LDSO has changed the methodology, however the LDSO must confirm to BSCCo each year that its methodology has not been revised. Any LDSO whose methodology does not comply with the LLF Methodology Principles will be considered non-compliant with the Balancing and Settlement Code (Code).

1.2.3 LLF Submission and Calculation Audit

For Host LDSOs and Embedded LDSOs that do not mirror

Following approval of the LLF Methodology, each Host LDSO and Embedded LDSO that does not Mirror shall calculate the LLFs in accordance with the approved methodology and submit these to BSCCo along with the Calculation Self-assessment Document (CSAD, Appendix 3 and Appendix 5), providing evidence of compliance with the LLF methodology principles. BSCCo shall conduct an audit on the calculation of the LLFs created using the approved methodology for each submission. BSCCo shall publish LLFs submitted by Host LDSOs and Embedded LDSOs that do not Mirror, via the BSC Website. After the end of the MHHS Transition Period, pending data, including unapproved LLFs, will no longer be available on the BSC Website. However, pending data can still be obtained from BSCCo upon request. An LDSO that does not mirror may also be an Embedded LDSO that mirrors.

For Embedded LDSOs that mirror

Embedded LDSOs that Mirror the LLFs of such LDSOs, can obtain these LLFs from BSCCo, and then make their LLF submission using an SVA Format data file (D0265) and/or SVA Short Format files(s) along with a CSAD (Appendix 4), tailored specifically for Embedded LDSOs

© Elexon Limited 2025

that Mirror, to BSCCo. BSCCo shall conduct an audit of the LLF values against the relevant approved methodology.

BSCCo shall liaise with the LDSO so that during the audit process, the LDSO can correct any non-compliances and BSCCo re-audit, before a final report is ~~issued~~ presented to the ~~I~~ relevant Code Committees ~~Panel~~.

When requesting approval of a new LLFC Id, in accordance with BSCP509, or a new DUoS Tariff ID and LLF ID in accordance with BSCP707 the LDSO shall submit its SVA LLFs and a completed CSAD to BSCCo. Any new DUoS Tariff IDs and LLF IDs shall be submitted before the SVA LLFs. DUoS Tariff IDs and LLFCs must remain aligned until the end of the MHHS Transition Period. Where the registration of a Metering System is being transferred from SMRS to CMRS, then the LDSO shall use this BSCP128 to apply for the approval of CVA LLFs applicable to the Metering System to be registered in the CMRS.

1.2.4 Approval of LLFs

BSCCo shall report the audited LLFs to the relevant Code Committees~~Panel~~. The relevant Code Committees ~~Panel~~ shall make recommendations to BSCCo as to whether the ~~approve~~ LLFs should be approved for use in Settlement. BSCCo shall approve the LLFs for use in Settlement and, where LLFs have not passed the calculation audit, BSCCo shall recommend default values to be presented to the ~~approved by the Panel~~ relevant Code Committees to make recommendations for BSCCo to approve, in accordance with the rules in Section 3.3. BSCCo shall report the outcome of their decision ~~Panel~~ meeting to the LDSO. The LDSO shall correct any non-compliance(s) and submit revised LLFs, which BSCCo ~~the Panel~~ may approve for the remainder of the relevant BSC year.

BSCCo shall provide a copy of the report presented to the relevant Code Committees ~~the Panel~~ with details of any non-compliance(s) to PAB. PAB shall manage the identified non-compliances existing at the end of the LLF audit, in line with the current Risk Operating Plan.

1.2.5 Implementation of LLFs for use in Settlement

Approved LLFs will be published within an Industry Standing Data (ISD) catalogue in the ISD Data Store.

BSCCo shall provide the CDCA with approved CVA LLFs for entry into the CDCA system for CVA Metering Systems for use in Settlement.

BSCCo shall provide the SVAA with approved SVA LLFs for entry into the SVAA systems for use in Settlement.

BSCCo shall also publish approved LLFs on the BSC Website. Half Hourly Data Aggregators shall obtain and implement approved SVA LLFs for use in Settlement for non-migrated Metering Systems.

The SVAA shall obtain and implement approved SVA LLFs for use in Settlement for MHHS Metering Systems.

1.3 Key Milestones

The key milestones in this procedure are:

© Elexon Limited 2025

OFFICIAL

(a) Submission of methodologies in accordance with Section 2.1 or Section 2.2;

(b) Review of methodologies in accordance with Section 2.1 or Section 2.2;

(c) Approval of methodologies in accordance with Section 2.1 or Section 2.2;

(d) Submission of Line Loss Factors in accordance with Section 2.3 or Section 2.4;

(e) Audit of Line Loss Factors in accordance with Section 2.3 or Section 2.4;

(f) Approval of LLFs in accordance with Section 2.3 or Section 2.4; and

(g) Notification of Approved LLFs to CDCA/SVAA in accordance with Section 2.3.

1.4 Balancing and Settlement Code Provision

This BSCP should be read in conjunction with the Code and in particular Sections K, R, Annex S-2 and Annex S-3

This BSC Procedure has been produced in accordance with the provisions of the Code. In the event of an inconsistency between the provisions of this BSC Procedure and the Code, the provisions of the Code shall prevail.

1.5 Associated BSC Procedures

CVA Metering Systems	SVA Metering Systems
BSCP15 - BM Unit Registration	BSCP38 - Authorisations
BSCP25 - Registration of Transmission System Boundary Points, Grid Supply Points, GSP Groups and Distribution Systems Connection Points	BSCP68 - Transfer of Registration of Metering Systems between CMRS and SMRS
BSCP38 - Authorisations	BSCP503 - Half Hourly Data Aggregation For Metering Systems Registered in SMRS.
BSCP68 - Transfer of Registration of Metering Systems between CMRS and SMRS	BSCP508 - Supplier Volume Allocation Agent. BSCP703 – BSC Central Services for MHHS Metering Systems
BSCP75 - Registration of Meter Aggregation Rules for Volume Allocation Units	BSCP509 - Changes to Market Domain Data BSCP707 – Changes to Industry Standing Data
BSCP515 - Licensed Distribution	BSCP515 - Licensed Distribution
BSCP705 – Licensed Distribution for MHHS Metering Systems [1]	BSCP705 – Licensed Distribution for MHHS Metering Systems

[1] The text relating to CVA Metering Systems in BSCP705 is identical to that in BSCP515. BSCP705 will replace BSCP515 after the transition period.

© Elexon Limited 2025

1.6 Use of the Procedure

Throughout this BSCP, timetables reflect the number of Working Days (WD) by which an activity should be completed, and may refer to the Effective From Date (EFD), being the day on which the approved LLF comes into use in Settlement.

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 BSC Service Desk.

© Elexon Limited 2025

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)
DUoS Tariff Id(s)	Equivalent of LLFC Id for MHHS Metering Systems
EFD	Effective From Date
GSP	Grid Supply Point
GSPG	Grid Supply Point Group
HHDA(s)	Half Hourly Data Aggregator(s)
Id	Identifier
ISD	Industry Standing Data
LDSO	Licensed Distribution System Operator[2]
LLF	Line Loss Factor
LLF Id	Line Loss Factor Identification
LLFC Id(s)	Line Loss Factor Class Identifier(s) equivalent of DUoS Tariff ID for non-MHHS Metering Systems
LLFC(s)	Line Loss Factor Class (es)
MDD	Market Domain Data
MSID	Metering System Identifier
SAF	Stakeholder Advisory Forum
SMRS	Supplier Meter Registration Service
SVA	Supplier Volume Allocation
SVA LLF(s)	SVA Line Loss Factor(s)
SVAA	Supplier Volume Allocation Agent
WD	Working Day

[2] This includes both Host LDSOs and Embedded LDSOs.

© Elexon Limited 2025

1.8.2 Definitions

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

Extra High Voltage (EHV)	As defined in the LDSO's approved LLF methodology.
Embedded LDSO	A LDSO operating an independent distribution network connected to a Host LDSO's distribution network[3]. e.g. This includes both independent LDSOs; and Host LDSOs that are operating outside their geographical area.
Day (Generic)	As defined in each Distribution System Operator's Methodology Statement.
Generic LLF	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.
LLFC Group (Generic)	A group of Line Loss Factor Classes that share the same generic set of Line Loss Factors.
Night (Generic)	Hours of the Settlement Day not covered by Day (Generic).
Host LDSO	A LDSO operating a distribution network that is directly connected to the Transmission System in their own distribution licence area.
High Voltage (HV)	As defined in the LDSO's approved LLF methodology excluding those high-voltage metered sites defined as EHV sites.
Low Voltage (LV)	As defined in the Special Conditions of a distribution licence granted pursuant to section 6(1)(c) of the Electricity Act 1989.
Manifest error: Retrospective changes	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.
Material impact: Retrospective changes	An impact or estimated impact that has a value or estimated value greater than or equal to the Materiality Threshold for rectification of a valid Trading Dispute (as defined in BSC Procedure BSCP11).
Mirror/Mirroring	Where the Embedded LDSO replicates the Generic Line Loss Factors of the relevant Host LDSO for their own specified LLFCs for the GSP Group.
Non-Technical Losses	Losses other than Technical Losses.
Registrant	See BSC Annex X-1
Remote Audit	An audit that is not performed at the LDSO's offices but is performed using data requests to review records and conduct interviews remotely

[3] 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.

© Elexon Limited 2025

Site Specific LLF	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.
Site Specific: Material Change	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 BSCCo~~the Panel~~.
Site Specific: Relevant Change	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.
Technical Losses	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.

© Elexon Limited 2025

OFFICIAL

2. Interface and timetable information

2.1 [Code Reform]Methodology Review for Host LDSOs and Embedded LDSOs that do not Mirror

REF.	WHEN	ACTION	FROM	TO	INFORMATION REQUIRED	METHOD
2.1.1	By 1 August 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.	ISD Portal 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; or advise LDSO that no methodology has been submitted.	BSCCo	LDSO	Confirmation of receipt and notification of any initial concerns; or notification of failure to submit methodology.	Email, telephone or other electronic means
2.1.3	Within 5 WD of 2.1.1	Review methodology for compliance with the LLF Methodology Principles in accordance with Section 3.1 and provide draft report highlighting any non-compliance(s); or confirmation of continued use of approved methodology has been submitted.	BSCCo	LDSO	Methodology, MSAD, draft LDSO report, any non-compliances or confirmation of continued use of approved methodology.	Email or other electronic means

© Elexon Limited 2025

OFFICIAL

REF.	WHEN	ACTION	FROM	TO	INFORMATION REQUIRED	METHOD
2.1.4	Within 5 WD of 2.1.3	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.	ISD Portal Email, telephone or other electronic means
2.1.5	Within 15 WD of 2.1.1	If non-compliance(s) have been identified, review submission in Ref (2.1.4). Provide report with confirmation of compliance or non-compliance.	BSCCo	LDSO	LDSO report.	Email, telephone or other electronic means
2.1.6	To meet relevant Code Committees ~~Panel~~ requirements	Submit a final report to ~~Panel~~ relevant Code Committees stating: (a) BSCCo's proposed approval outcome~~Recommendations for the approval of~~ each methodology with no non-compliance(s) or corrected non-compliance(s); or (b) Any continued non-compliance(s); or (c) Any failures to submit methodology or confirmation of continued use of approved methodology.	BSCCo	~~Panel~~ Relevant Code Committees	Final report.	Email or other electronic means

© Elexon Limited 2025

REF.	WHEN	ACTION	FROM	TO	INFORMATION REQUIRED	METHOD
2.1.7	Within 1 WD of 2.1.6	Review report submitted in Ref (2.1.6) and: Approve methodologies with no outstanding non-compliance(s); and Note any non-compliance(s); and Note any failures to submit a methodology or confirmation of continued use of existing approved methodology.	~~Panel~~BSCCo	~~BSCCo~~	Final report and ~~Panel~~ BSCCo decision.	-
2.1.8	Within 5 WD of 2.1.7	Notify each LDSO stating whether ~~the~~ BSCCo~~Panel~~: Approved the methodology; or Noted any non-compliance(s); or Noted the failure to submit a methodology; or Noted the failure to submit confirmation of continued use of existing approved methodology.	BSCCo	LDSO	Notification detailing BSCCo's ~~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

© Elexon Limited 2025

2.2 [Code Reform]Methodology Review – Embedded LDSOs that Mirror

REF.	WHEN	ACTION	FROM	TO	INFORMATION REQUIRED	METHOD
2.2.1	By 1 August prior to relevant BSC year	If Embedded LDSO intends to use their own methodology they must submit proposed methodology and MSAD or MSAD only where there has been no change since the methodology was last approved.	Embedded LDSO	BSCCo	Confirmation of Mirroring Host or Embedded LDSO methodology and MSAD, in accordance with Appendix 2.	ISD Portal 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~~ relevant Code Committees 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~~ relevant Code Committees	Report.	Email or other electronic means

© Elexon Limited 2025

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

© Elexon Limited 2025

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

REF.	WHEN[4]	ACTION	FROM	TO	INFORMATION REQUIRED	METHOD
2.3.1	By 1 August prior to the relevant BSC year	If required, send request to the relevant Host LDSO for boundary equivalent LLF values at the boundary between a Host LDSO and Embedded LDSO within the same GSP Group, to enable the Embedded LDSO to calculate Site Specific LLFs.	Embedded LDSO	Host LDSO	Embedded LDSO boundary equivalent profile(s) and other information required by the relevant Host LDSO. This should be agreed by the Host LDSO and Embedded LDSO prior to this deadline.	Email or other electronic means
2.3.2	Within 2 WD of Ref (2.3.1)	Acknowledge receipt of LLF request. Or if incomplete information has been received from Embedded LDSO, request outstanding information.	Host LDSO	Embedded LDSO	Confirmation of receipt and notification of any initial concerns.	Email or other electronic means
2.3.3	By 1 September	If LLF methodology has been approved, submit data request for Remote Audit or propose dates to conduct a site visit. If LLF methodology has not been approved, submit data request for Remote Audit or agree site visit dates as soon as any outstanding non-compliance(s) have been resolved.	BSCCo	LDSO	Data request[5] or dates for site visit.	Email, telephone or other electronic means

[4] 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.

[5] The data request will include a list of Metering Systems to be audited for the correct application of LLFC/DUoS Tariff ID.

© Elexon Limited 2025

OFFICIAL

REF.	WHEN[4]	ACTION	FROM	TO	INFORMATION REQUIRED	METHOD
2.3.4	By 10 September	If a site visit is required, agree date(s) with BSCCo. Where a date has not been agreed by this time BSCCo shall determine a suitable date for the site visit. If a data request for Remote Audit has been provided, confirm that the data can be provided by 30 September.	LDSO	BSCCo	Data request or dates for site visit.	Email, telephone or other electronic means
2.3.5	By 1 October	If applicable, provide calculated boundary equivalent LLFs requested in Ref (2.3.1).[6]	Host LDSO	Embedded LDSO	LLF values.	Email or other electronic means
2.3.6	Within 2 WD of Ref (2.3.5)	If applicable, acknowledge receipt of LLF values.	Embedded LDSO	Host LDSO	Confirmation of receipt.	Email or other electronic means

[6] If the boundary LLFs are later recalculated as a result of a non-compliance, the Embedded LDSO will need to recalculate the impacted Site Specific LLFs.

© Elexon Limited 2025

REF.	WHEN[4]	ACTION	FROM	TO	INFORMATION REQUIRED	METHOD
2.3.7	By 30 September or 31 October for Embedded LDSOs submitting Site Specific LLFs	Submit calculated LLFs[7] in accordance with the approved methodology. This should be in the form of a completed CSAD Appendix 3[8] signed by an authorised signatory as well as a completed CSAD Appendix 5. If you are a Host LDSO, submit any calculated boundary equivalent LLFs requested in Ref (2.3.1). Additionally, if there has been a change to a Line Loss Factor Class (LLFC), DUoS Tariff ID or LLF ID for an SVA submission then submit appropriate changes in accordance with BSCP509 or BSCP707 as appropriate. ISD Portal Errors generated by the system validation will be reported to the LDSO and BSCCo. LDSOs shall review the report and resubmit the Appendix 5 as required.	LDSO	BSCCo	CSAD (Appendix 3) signed by an authorised person in accordance with BSCP38, a completed CSAD Appendix 5 and: (a) If CVA Submission: CVA Long or Short Format data files, in accordance with Appendix 6; and/or (b) If SVA Submission: SVA Format data file (D0265) in accordance with Appendix 7 and information in accordance with BSCP509 if MDD changes are required for non-MHHS Metering Systems or in accordance with BSCP707 for MHHS Metering Systems; and (c) If SVA and/or CVA Submission: MHHS-format Appendix 5 and information in accordance with BSCP707 if ISD changes are required LDSOs shall submit all LLFs in both the new and old formats, regardless of whether they relate to migrated or non-migrated metering systems. Keep equivalent boundary LLFs in a separate file from BSCP128 Appendix forms.	ISD Portal; and Email or other electronic means

[7] Separate Site Specific LLFs for Import and Export Metering Systems may be applied in accordance with BSCP75.
[8] Please note that the CSAD covers both CVA and SVA LLFs.

© Elexon Limited 2025

REF.	WHEN[4]	ACTION	FROM	TO	INFORMATION REQUIRED	METHOD
2.3.8	Within 2 WD of Ref (2.3.7)	Acknowledge receipt of CSAD and LLFs and confirm authorised signature.	BSCCo	LDSO	Confirmation of receipt and authorised signature.	Email, telephone or other electronic means
2.3.9	Within 10 WD of Ref (2.3.7)[9]	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 8.	Email or other electronic means
2.3.10	Within 10 WD of Ref (2.3.7)	Publish submitted LLFs on the BSC Website. Only applicable during the transition period up until MHHS Milestone 15.	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
2.3.11	Between 1 October and 20 November on date agreed in Ref (2.3.4) above	Conduct calculation audit in accordance with Section 3.5.[10,11] If LLFs have been re-calculated conduct audit, including spot checks on MSIDs. If Host LDSOs have provided boundary equivalent LLFs to the Embedded LDSO, complete Host LDSO audit between 1 October and 12 November.	BSCCo		CSAD documents, validation reports and: (a) If CVA Submission: CDCA-I022 data file; and/or (b) If SVA Submission: D0265 data file; and (c) ISD Entity M20 and M21 data	CSAD review, LLF system validation, , site visits

[9] If Host LDSO LLFs have not been submitted by 30 September,or if Embedded LDSOs that do not Mirror LLFs have not been [H/K]submitted by 31 October, provide summary report of LLFs after 5 WD from the date of Host LDSO LLF submission (or LLF submission by Embedded LDSOs that do not Mirror).

[10] 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 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 identify 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).

[11] 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.

© Elexon Limited 2025

REF.	WHEN[4]	ACTION	FROM	TO	INFORMATION REQUIRED	METHOD
2.3.12	Within 5 WD of calculation audit[12]	Provide draft audit report highlighting any identified non-compliance(s) including where non-compliance of boundary equivalent LLFs requires recalculation of Embedded LDSO Site Specific LLF values.	BSCCo	LDSO	Draft LDSO report.	Email or other electronic means
2.3.13	Within 15 WD of calculation audit	Resolve any non-compliance(s) identified in Ref (2.3.12) and notify BSCCo. If applicable, provide recalculated boundary equivalent LLFs to Embedded LDSO.	LDSO	BSCCo Embedded LDSO	Any further information required and evidence of resolved non-compliance(s). LLF values	Email, telephone or other electronic means

[12] Where no site visit is required the calculation audit will be limited in scope.

© Elexon Limited 2025

REF.	WHEN[4]	ACTION	FROM	TO	INFORMATION REQUIRED	METHOD
2.3.14	By 10 December	Submit any revised LLFs to address any outstanding non-compliance(s). ISD Portal Errors generated by the system validation will be reported to the LDSO and BSCCo. LDSOs shall review the report and resubmit the Appendix 5 as required.	LDSO	BSCCo	Any revised LLFs as required and final CSAD with evidence of resolved non-compliance(s). Final CSAD Appendix 3 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 6; and/or (b) If SVA re-submission: SVA Format data file (D0265) in accordance with Appendix 7 and information in accordance with BSCP509 if MDD changes are required for non-MHHS Metering Systems or in accordance with BSCP707 for MHHS Metering Systems. (c) If SVA and/or CVA Submission: MHHS-format Appendix 5 and information in accordance with BSCP707 if ISD changes are required LDSOs shall submit all LLFs in both the new and old formats, regardless of whether they relate to migrated or non-migrated metering systems.	ISD Portal, Email or other electronic means, as required

© Elexon Limited 2025

REF.	WHEN[4]	ACTION	FROM	TO	INFORMATION REQUIRED	METHOD
2.3.15	By 31 December	Conduct calculation audit on revised submission.	BSCCo	-	CSAD documents, validation reports and: (a) If CVA Submission: CDCA-I022 data file; and/or (b) If SVA Submission: D0265 data file for non-MHHS Metering Systems or Published ISD Catalogue for MHHS Metering Systems.; and/or (c) ISD Entity M20 and M21 data	CSAD review, LLF system validation
2.3.16	By 31 December.	Provide final audit report and confirmation of compliance or non-compliance.	BSCCo	LDSO	Final LDSO report.	Email, telephone or other electronic means.
2.3.17	By 31 December	Publish revised LLFs on the BSC Website. Only applicable during the transition period up until MHHS Milestone 15.	BSCCo		SVA LLF Summary Report and: (a) If CVA Submission: CDCA-I022 data files; and/or (b) If SVA Submission: D0265 data files for non-MHHS Metering Systems or Published ISD Catalogue for MHHS Metering Systems.	BSC Website

© Elexon Limited 2025

REF.	WHEN[4]	ACTION	FROM	TO	INFORMATION REQUIRED	METHOD
2.3.18	To meet ~~Panel~~ relevant Code Committees Requirements	Submit a 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[13]. Where MDD/ISD changes have been identified submit notice in accordance with BSCP509/BSCP707 that there has been (or is due to be) a change to MDD/ISD for Panel approval.	BSCCo	Relevant Code Committees~~Panel~~	Final report, any default values and any MDD/IDD changes.	Email or other electronic means
2.3.19	~~To meet Panel Requirements~~Following 2.3.18	Approve LLFs with no identified non-compliance(s) and note any non-compliant LLFs in Ref (2.3.18) above. Approve default values for any non-compliant LLFs.	~~Panel~~BSCCo	~~BSCCo~~	LLFs, Final report and any default values.	-Internal process
~~2.3.20~~	~~Within 1 WD of Ref (2.3.19)~~	~~Notify Panel decision.~~	~~Panel~~	~~BSCCo~~	~~Panel decision.~~	-
2.3.20~~1~~	To meet PAB requirements	Provide a copy of the final report in Ref (2.3.18) giving details of any non-compliance(s).	BSCCo	PAB	Final report in Ref (2.3.18) with details of any non-compliance(s).	
2.3.21~~2~~	Within 2 WD of Ref (2.3.20)	Provide a final report for the LDSO stating whether BSCCo~~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 BSCCo's ~~Panel~~ approval of LLFs; any default values and any continued non-compliance(s).	Email or other electronic means

~~[13] Where no methodology has been approved, default LLFs shall be presented to the Panel for approval.~~

© Elexon Limited 2025

REF.	WHEN[4]	ACTION	FROM	TO	INFORMATION REQUIRED	METHOD
2.3.223	As agreed between BSCCo and the LDSO	If BSCCo ~~the Panel~~ has noted any non-compliance(s), liaise with BSCCo to correct and re-submit LLFs.[14]	LDSO	BSCCo	Any revised LLFs as required and final CSAD with evidence of resolved non-compliance(s).	Email or other electronic means
2.3.234	Within 2 WD of Ref (2.3.1920)	Notify Parties of ~~LLFs~~ approved LLFs.~~by the Panel.~~	BSCCo	Parties	LLFs approved by BSCCo ~~the Panel~~ (including any default LLFs).	Email or other electronic means
2.3.245	Within 2 WD of Ref (2.3.20) for CDCA-I022 and D0265 data files; and in accordance with the ISD Release Schedule for the March ISD Publish for M20 (SVA LLFs) and M21 (CVA LLFs) data files	Update LLFs on BSC Website to be utilised in Settlement, when either: (a) BSCCo ~~The Panel~~ has approved the submission, update LLFs and EFD; or (b) If BSCCo ~~the Panel~~ has approved default values, update LLFs to default values to be used in Settlement and EFD. If SVA submission only – BSCCo should proceed to Ref (2.3.32). If both CVA and SVA submission then – BSCCo should proceed from Ref (2.3.28) onwards.	BSCCo	-	Confirmation of ~~Panel~~ BSCCo decision, LLFs and default values for non-approved LLFs.	Electronic means
2.3.256	Within 5 WD of Ref (2.3.25)	Obtain LLFs for the LLFCs from BSC Website.	-	HHDAs/ Suppliers	D0265 data files for non MHHS Metering Systems. Published ISD fortnightly catalogue for MHHS Metering Systems until MHHS Milestone M15 and monthly thereafter.	BSC Website

[14] As appropriate, BSCCo shall ~~present the corrected LLFs to Panel for approval and~~ inform PAB of the ~~Panel~~ outcome with respect to any non-compliances.

© Elexon Limited 2025

REF.	WHEN[4]	ACTION	FROM	TO	INFORMATION REQUIRED	METHOD
2.3.267	Within 10 WD of Ref (2.3.26)	HHDAs and Suppliers implement into systems.	HHDAs/ Suppliers	-	D0265 data files for non MHHS Metering Systems. Published ISD monthly catalogue for MHHS Metering Systems until MHHS Milestone M15 and monthly thereafter, and CVA.	-
2.3.278	By 10 March for CDCA-I022 data files[15], and in accordance with the ISD Release Schedule for the March ISD Publish for M21 data files.	Provide CDCA with CVA LLFs for use in Settlement: (a) If BSCCo ~~the Panel~~ has approved the CVA LLF submission, provide CVA LLFs and EFD; or (b) If BSCCo ~~the Panel~~ has approved default values, provide default CVA LLF values and EFD.	BSCCo	CDCA	For CDCA-I022 data files; 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. For ISD M21 data files: Confirmation of approval of CVA LLFs and EFD contained in ISD Data Catalogue; or Information contained in ISD Data Catalogue data files, default values and EFD.	Email or other electronic means
2.3.289	Within 1 WD of Ref (2.3.28)	Acknowledge receipt of CVA LLFs and notify BSCCo of any exceptions via the CDCA-I023 data file.	CDCA	BSCCo	CDCA-I022 data file.	Email or other electronic means

[15] CDCA-I022 data will only be provided to CDCA for an interim period, after which CVA LLF data will solely be sent by ISD

© Elexon Limited 2025

REF.	WHEN[4]	ACTION	FROM	TO	INFORMATION REQUIRED	METHOD
2.3.2930	Within a timescale agreed between CDCA and BSCCo	Implement approved CVA LLFs in accordance with CDCA-I022 data files supplied in Ref (2.3.28) above into CDCA systems.	CDCA	-	CDCA-I022 data files.	-
2.3.301	Within 1 WD of Ref (2.3.30)	Notify BSCCo of successful CDCA-I022 load.	CDCA	BSCCo	-	Email or other electronic means
2.3.312	In accordance with the ISD Release Schedule for the March ISD Publish	Provide SVAA with SVA LLFs for use in Settlement: (a) If BSCCo ~~the Panel~~ has approved the SVA LLF submission, provide SVA LLFs and EFD; or (b) If BSCCo ~~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 ISD Data Catalogue; or Information contained in ISD Data Catalogue data files, default values and EFD.	Email or other electronic means
2.3.323	Within 1 WD of Ref (2.3.32)	Acknowledge receipt of SVA LLFs.	SVAA	BSCCo	-	Email or other electronic means
2.3.334	Within a timescale agreed between SVAA and BSCCo	Implement approved SVA LLFs in accordance with D0265 data files supplied in Ref (2.3.32) above into SVAA systems or Published ISD Data Catalogue (as appropriate) supplied in Ref (2.3.28) into SVAA system..	SVAA		D0265 data files. Information contained in Published ISD Data Catalogue	Email or other electronic means
2.3.345	Within 1 WD of Ref (2.3.34)	Notify BSCCo of successful D0265 data file load.	SVAA	BSCCo	-	Email or other electronic means

© Elexon Limited 2025

2.4 Annual Submission and Audit of LLFs – Embedded LDSOs that Mirror

REF.	WHEN	ACTION	FROM	TO	INFORMATION REQUIRED	METHOD
2.4.1	By 1 September	Provide list of Metering Systems to be audited for the correct application of LLFC/ DUoS Tariff ID.	BSCCo	Embedded LDSO	List of Metering Systems	Email or other electronic means
2.4.2	By 30 September	Confirm LLFC/ DUoS Tariff ID and voltage for each Metering System in list provided by BSCCo.	Embedded LDSO	BSCCo	List of Metering Systems	Email or other electronic means
2.4.3	By 10 October	Check a representative sample of Metering Systems are assigned to the correct LLFC/ DUoS Tariff ID.	BSCCo	-	MSAD Metering System sample	Email, other electronic means or Site visit
2.4.4	By 10 October	Provide Metering System sample report highlighting any non-compliance(s).	BSCCo	Embedded LDSO	Metering System sample report.	Email or other electronic means
2.4.5	By 31 December	Resolve any identified non-compliance(s) in Ref (2.4.4) and notify BSCCo.	Embedded LDSO	BSCCo	Any further information required and evidence of resolved non-compliance(s).	Email, telephone or other electronic means

© Elexon Limited 2025

REF.	WHEN	ACTION	FROM	TO	INFORMATION REQUIRED	METHOD
2.4.6	By 31 December + 10 WD	Obtain LLFs submitted by the relevant Host LDSO(s) or Embedded LDSOs that do not Mirror; and submit CVA Submissions as required, SVA Format data file (D0265) and/or SVA Short Format file(s)[77] and supporting CSAD documents in accordance with approved Host LDSO or Embedded LDSO methodology. ISD Portal Errors generated by the system validation will be reported to the LDSO and BSCCo. LDSOs shall review the report and resubmit the SVA Short Format or Appendix 5 file (CVA LLFs only) as required.	Embedded LDSO	BSCCo	LDSO's submitted LLFs; (a) If CVA Submission: CVA Long or Short Format data files in accordance with Appendix 6; and (b) If CVA Submission: MHHS-format Appendix 5 (c) If SVA Submission: SVA Format data file (D0265) or Short Format data file(s) in accordance with Appendix 7 and information in accordance with BSCP509 if MDD changes are required non-MHHS Metering Systems or in accordance with BSCP707 for MHHS Metering Systems. This must be accompanied by a CSAD for Embedded LDSOs that Mirror in accordance with Appendix 4, signed by an authorised person in accordance with BSCP38 and an Appendix 5.	ISD Portal; and Email or other electronic means
2.4.7	Within 2 WD of 2.4.6	Acknowledge receipt of CSAD and LLFs and confirm authorised signature.	BSCCo	Embedded LDSO	Confirmation of receipt and authorised signature.	-

© Elexon Limited 2025

REF.	WHEN	ACTION	FROM	TO	INFORMATION REQUIRED	METHOD
2.4.8	Within 4 WD of 2.4.6	Conduct LLF Calculation Audit.	BSCCo	-	CSAD documents, validation reports; and: (a) If CVA submission: CVA Long or Short Format data files or other format agreed with BSCCo; and/or (b) SVA submission: D0265 ISD Entity M20 data.	LLF system validation, Host LDSO LLF submissions
2.4.9	Within 6 WD of 2.4.6	Provide draft audit report highlighting any non-compliance(s).	BSCCo	Embedded LDSO	Draft LDSO report.	Email or other electronic means
2.4.10	Within 10 WD of 2.4.9	Resolve any identified non-compliance(s) in Ref (2.4.9) and notify BSCCo.	Embedded LDSO	BSCCo	Any further information required and evidence of resolved non-compliance(s).	Email, telephone or other electronic means

© Elexon Limited 2025

REF.	WHEN	ACTION	FROM	TO	INFORMATION REQUIRED	METHOD
2.4.11	At same time as 2.4.10	Submit any revised LLFs to address any outstanding non-compliance(s). ISD Portal Errors generated by the system validation will be reported to the LDSO and BSCCo. LDSOs shall review the report and resubmit the SVA Short Format or Appendix 5 file (CVA LLFs only) as required.	Embedded LDSO	BSCCo	Any revised LLFs as required and final CSAD with evidence of resolved non-compliance(s). The submission should include the final CSAD Appendix 4 signed by an authorised person in accordance with BSCP38 as well as an Appendix 5 and: (a) If CVA re-submission: CVA Long or Short Format data files in accordance with Appendix 6; and/or (b) If SVA re-submission: SVA Format data file (D0265) or Short Format file(s) in accordance with Appendix 7; and (c) Information in accordance with BSCP509 if MDD changes are required for non-MHHS Metering Systems. For MHHS Metering Systems, in accordance with BSCP707.	ISD Portal, Email or other electronic means, as required
2.4.12	Within 4 WD of 2.4.10	Conduct calculation audit on revised submission.	BSCCo	-	-	CSAD review, LLF system validation.
2.4.13	Within 6 WD of 2.4.10	Produce final audit report and confirmation of compliance or non-compliance. Proceed to Section 2.3 of this BSCP and continue onwards from Ref (2.3.18) to complete the submission and audit process.	BSCCo	Embedded LDSO	Final LDSO report.	Email or other electronic means

© Elexon Limited 2025

© Elexon Limited 2025

2.5 Mid-year submission of new and revised LLFs[16]

REF.	WHEN[44]	ACTION	FROM	TO	INFORMATION REQUIRED	METHOD
2.5.1	No later than the ISD CR submission[17] deadline set out in the process for the relevant ISD version, and no less than 2 WDs after the corresponding ISD CR has been submitted	Submit calculated LLFs in accordance with the approved methodology and completed CSAD[88] (Appendix 10) signed by an authorised signatory. ISD Portal Errors generated by the system validation will be reported to the LDSO and BSCCo. LDSOs shall review the report and resubmit the Appendix 5 or SVA Short Format file as required.	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 6; and/or (b) If SVA Submission: SVA Format data file (D0265) in accordance with Appendix 7 and information in accordance with BSCP509 if MDD changes are required for non-MHHS Metering Systems. For MHHS Metering Systems, in accordance with BSCP707.	ISD Portal; and 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 other electronic means

[16] 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 of this document.
[17] Refer to the ISD release schedule published on the BSC Website for general changes.

© Elexon Limited 2025

REF.	WHEN[44]	ACTION	FROM	TO	INFORMATION REQUIRED	METHOD
2.5.3	Within 5 WD of 2.5.1	Conduct calculation audit.[1010]	BSCCo		CSAD documents, validatiion reports; and (a) If CVA submission: CVA Long or Short Format data files and ISD Entity M21 data; and/or (b) If SVA submission: D0265 data files for non-MHHS Metering Systems and ISD Entity M20 data.	LLF system validation, LDSO LLF submissions
2.5.4	Within 5 WD of 2.5.3	Produce final report and confirmation of compliance or non-compliance. Proceed to Ref (2.3.19).	BSCCo	LDSO	Final Report.	Email or other electronic means

© Elexon Limited 2025

3. Supporting Information

3.1 [Code Reform]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 losses and the total Grid Supply Point Group (GSPG) losses shall be considered in the calculation of Generic LLFs.[18]

6. Non-EHV Generic LLFs 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/DUoS Tariff ID Groups, in each GSPG, and at least 1 Generic EHV LLFC/DUoS Tariff ID Group All DUoS Tariff IDs to be mapped to an appropriate LLFid.

8. As a minimum, Generic LLFs shall be calculated separately for Day and Night.

9. LDSOs shall utilise Settlement data from a Settlement Run at R3 or greater and from a complete 12-month period, for calculating Generic LLFs. The 12-month period to be used shall be the BSC Year[19] 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 BSCCo in consultation with relevant Code Committees and/or the SAF~~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.

[18] This principle allows Site Specific Losses to be calculated individually or in aggregate and then used in the calculation of Generic LLFs.
[19] 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.

© Elexon Limited 2024

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.[20]

14. No changes shall be made to approved Generic LLFs 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 replaced with approved LLFs on a prospective basis as determined when the LLFs resubmitted by the LDSO have been approved by BSCCo ~~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~~BSCCo. 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 BSCCo~~the Panel~~.

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 calculation, or default replacement process shall be undertaken.

    A default replacement process shall be deemed to have been undertaken if a generic methodology is used where the following applies[21]:

    (a) A Site[22] has multiple connections to the Total System and the primary connection is at EHV but there is a subordinate connection that is not connected at EHV, then a generic methodology **MAY** be used for the subordinate connection (even if a Site specific LLF is used for the Site's primary connection as per Principle 1); and

    (b) The connection has a capacity of less than or equal to 1MVA

3.2 [Code Reform]Guidelines for the approval of LLF Values

The BSCCo will employ the following guidelines in its ~~submission~~ approval 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

[20] Appendix 3.4 provides clarification on how this should be implemented.
[21] If a connection is at EHV due to the Import/Export capacity associated with its primary purpose but, a much lower Import/Export capacity is also required for secondary purposes, which would be a non-EHV connection if considered in its own right, this default replacement process **MAY** also apply e.g. a single Metering System with separate Import and Export MSIDs
[22] In this context, Site has the meaning given to it in BSC Section K 1.6

© Elexon Limited 2024

(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 [Code Reform]Use of Default Values

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

(a) The values shall be the last approved LLFs;

(b) Where there are no previously approved Site Specific LLFs, the default values shall be the approved Generic LLFC/DUoS Tariff ID Group LLFs for the equivalent voltage level[23];

(c) Where there are no previously approved Generic LLFs, the default values shall be set to 1.000 (unity);

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

For existing Site Specific LLFs or a Generic LLFC/DUoS Tariff ID 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 BSCCo~~the Panel~~, whereupon the new approved LLFs shall be applied on a prospective basis only.

The default LLFs are applied on the equivalent Seasonal Time of Day (SToD)[24] basis, for example, the previously approved LLFs for a 'Night' SToD period will be the default LLFs for a Night SToD period in the next year.

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 2.3.25.

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 20 April 2009;

[23] This also applies to new sites energised mid-year.
[24] STOD (Seasonal Time of Day) Distribution losses vary according to the time the power is taken by the customer. Typically there will be different LLFs for Day, Night, Summer Day and Winter Day and Winter Peak times. The STOD periods are specified in the LDSO's methodology statement.

© Elexon Limited 2024

(b) Site Specific LLFs which have not been recalculated in the last 5 years prior to 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 20 April 2009; and

(d) Where 12-month Settlement data becomes available, the standard deadlines for submission of the methodology and LLF values listed in Section 2 still apply. Embedded LDSOs who are unable to meet these deadlines will need to continue to Mirror the Host LDSOs Generic LLFs.

3.5 LLF Calculation Audit Scope

The LLF Calculation audit[25] 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 6;

   (b) For SVA LLFs, confirm that the D0265 file is in accordance with the format defined in the Energy Market Data Specification (EMDS) in Appendix 7.

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. Confirm that all LLF IDs submitted are in ISD or an application has been made to do so and that LLFs have been submitted for all LLF IDs contained in ISD and published as part of the ISD Catalogue.;

8. Conduct a validation check, which will pick out[26]:

   (a) All SVA LLFs which are <0.750 or >1.250.

   (b) All CVA LLFs which are <0.750 or >1.250.

[25] BSCCo will use a LLF validation system to conduct a number of the validation checks as outlined in this section.
[26] 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.

© Elexon Limited 2024

(c) All revised SVA LLFs which are outside a range specified as:

{last year's LLF minus 20% of last year's loss[27]} to {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:

{last year's LLF minus 50% of last year's loss[27~~25~~]} to {last year's LLF plus100% of last year's loss};

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).

(f) All site specific SVA or CVA LLFs for which a default calculation, or default replacement had been applied;

Examples:

(i) if for a given SToD period/periods instead of Settlement consumption or generation data, a set energy threshold was applied (e.g. 200 kVA); or

(ii) if for a given SToD period/periods generic LLF values were applied.

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

For the site specific audit the LDSOs are required to submit details of how the site specific LLFs have been calculated. Appendix 9 can be used to submit the

[27] The loss refers to the proportion of energy lost as a result of electricity flowing through the Distribution System.

© Elexon Limited 2024

OFFICIAL

information but if the LDSO decides to submit their own format it must comply with the following guidelines:

Requirement	Description of Requirement
1	The calculation details must be provided in a spreadsheet format (requirement 7 and 9 can be provided in additional attachments)
2	Show the year of data being used to calculate the Line Loss Factor
3	Show that the Line Loss Factor calculation takes into account both variable losses and fixed losses
4	Show/confirm that the Line Loss Factor calculation takes into account Technical Losses only
5	Show that Line Loss Factor is calculated for the SToD as defined in the methodology statement
6	Show the difference in network losses when the customer is connected and disconnected
7	Provide screenshot/raw data to support requirement 6
8	Show the customer's load data that is being used to calculate the Line Loss Factor
9	Show the customer's line diagram and label the connection voltage for the customer
10	Check the calculated Line Loss Factor values against previously approved values (within acceptable tolerance level)
11	Show both export and import LLF calculations using the “Additional LLF Calculation” sheet. Provide a description on how the export LLF and import LLF are combined to calculate the final LLF. This is only applicable if export and import LLFs are individually calculated and then combined to derive the final LLF.

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

© Elexon Limited 2024

OFFICIAL

3.6 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.

Appendix 5: Calculation Self-Assessment Document (CSAD) 2.1 and 2.2 Supporting Data for Host LDSOs and Embedded LDSOs that do not Mirror.

LLF Submission forms

Appendix 6: CVA Long and Short Format data files.

The CVA Long Format is essentially a file containing every Line Loss Factor (LLF) for every Settlement Period of every Settlement Day for the BSC Year. This is provided by the LDSO to BSCCo and the format of this data file is detailed in Appendix 6.

Appendix 7: SVA Format data file (D0265) and SVA Short Format files.

This provides detail of line loss factors published by line loss factor class. This flow is sent from the Distributor to the Half Hourly Data Aggregator (HHDA), Supplier and the Supplier Volume Allocation Agent (SVAA). Further detail of this flow can be found in Appendix 7.

SVA LLF Summary Report

Appendix 8: SVA Summary Report.

The Summary Report is a schedule of Line Loss Factors provided to the LDSO. This is produced by BSCCo as an output from the SVA data files that was supplied by the LDSO and published on the Elexon portal. Further detail of can be found in Appendix 8.

Appendix 9: Calculation Self-Assessment Document (CSAD) Site Specific LLF Calculation Audit Evidence Template

Appendix 10: Calculation Self-Assessment Document (CSAD) for mid-year LLF submissions

Seasonal Time of Day Template

Appendix 11: Season al Time of Day (STOD) Template

© Elexon Limited 2024

AMENDMENT RECORD – BSCP128

Version	Date	Description of Changes	Changes Included	~~Mods/ Panel/ Committee Refs~~Approval references
1.0	20/04/09	First Published	P216	153/04
2.0	24/06/10	June 10 Release	CP1326	ISG111/03 SVG111/01
3.0	30/06/11	June 11 Release	CP1343	SVG122/02 ISG122/03
4.0	28/06/12	June 12 Release	CP1370	ISG135/05 SVG136/05
	28/06/12	June 12 Release	CP1371	ISG135/06 SVG136/06
5.0	28/02/13	February 13 Release	CP1375	ISG137/07 SVG139/07
6.0	26/06/14	June 14 Release	CP1407 v2.0	ISG157/01 SVG160/05 P225/12
7.0	03/11/16	November 16 Release	CP1461	ISG128/08 SVG186/04
8.0	22/02/18	February 2018 Release	CP1492	ISG198/06 SVG200/04
9.0	27/02/20	February 2020 Release	CP1519	ISG221/05 SVG224/04
10.0	01/09/21	1 September 2021 Non-Standard Release	P420	P316/05
11.0	04/11/21	4 September Standard Release	CP1547	ISG245/05 SVG247/03
12.0	29/02/24	24 February 2024 Standard Release	CP1578	ISG269/01 SVG271/02
13.0	22/09/25	22 September 2025 Non-Standard Release	P478, P489, CP1609, CP1610	Panel 355A/02, Panel 364/09, Panel 366/10, Panel 366/11

© Elexon Limited 2024

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.

© Elexon Limited 2024