
LLF METHODOLOGY AUDIT REPORT

Imbalance Settlement Group (ISG)

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Summary **Elxon reviewed the Line Loss Factor (LLF) methodology statements submitted by Licensed Distribution System Operators (LDSOs), in accordance with BSCP128. All methodologies are subject to approval by the Imbalance Settlement Group (ISG) and Supplier Volume Allocation Group (SVG). Elxon will publish the approved LLF methodology statements on the Elxon Portal.**

1. Methodology Review

- 1.1 In accordance with BSC Section K1.7.7, Elxon performed an annual review of the Line Loss Factor (LLF) methodology statements submitted by Licensed Distribution System Operators (LDSOs). The methodology review is set out in BSC Procedure 128 'Production, Submission, Audit and Approval of Line Loss Factors' (BSCP128).
- 1.2 Each year, Host LDSOs¹ and Embedded LDSOs² that calculate their own LLFs must prepare a methodology for calculating LLFs that complies with the LLF Methodology Principles in BSCP128, and submit this along with a Methodology Self-Assessment Document (MSAD) Appendix 2, providing evidence of compliance. This year's methodologies apply to LLFs that will be calculated for the 2023/24 BSC Year (1 April 2023 until 31 March 2024).
- 1.3 Where LDSOs operate an independent distribution network connected to a Host LDSO's distribution network, there is an alternative review process. These Embedded LDSOs must provide BSCCo with the details of each methodology that it intends to Mirror³. The Embedded LDSOs that Mirror submit this information within the MSAD Appendix 2.
- 1.4 Elxon reviewed each methodology statement/MSAD and liaised with the LDSOs so that the LDSOs could correct any non-compliances and Elxon could re-review, before this final report was issued to the SVG and ISG.

2. Methodology Statements and MSAD information

- 2.1 Elxon is satisfied that all LLF Methodology Statements are compliant with BSC Section K1.7.7 (a) and (b).
- 2.2 All Embedded LDSOs will mirror Host LDSO Generic LLFs.
- 2.3 One Embedded LDSO (Eclipse Power Networks) will also calculate its own Site Specific LLFs for the first time, as sufficient consumption data is now available. Where sufficient consumption data is unavailable, the

¹ A LDSO operating a distribution network that is directly connected to the Transmission System in their own distribution licence area.

² A LDSO operating an independent distribution network connected to a Host LDSO's distribution network.

³ Where the Embedded LDSO replicates the Generic Line Loss Factors of the relevant Host LDSO for their own specified LLFs for the GSP Group.

Embedded LDSO will continue to Mirror Host LDSO Generic LLFs. Embedded LDSOs that calculate LLFs are subject to the calculation audit.

2.4 One Embedded LDSO (Vattenfall Networks) intends to calculate its own Site Specific LLFs so has submitted a methodology statement. It will continue to Mirror Host LDSO Generic LLFs until sufficient consumption data (at least 12 months) is available.

2.5 The table below summarises any changes to the LDSO methodology statement:

LDSO	GSP Group(s)	Changes from previous year
Northern Powergrid	_F, _M	No change to how the LDSO calculates LLFs. Only minor amendments such as year, version number etc.
Electricity North West	_G	No change to how the LDSO calculates LLFs. Only minor amendments such as year, version number etc.
Scottish Power	_D, _N	No change to how the LDSO calculates LLFs. Only minor amendments such as year, version number etc.
UK Power Networks	_A, _C, _J	No change to how the LDSO calculates LLFs. Only minor amendments such as year, version number and format of the time period times.
Western Power Distribution	_B, _E, _K, _L	No change to how the LDSO calculates LLFs. Only minor amendments such as year, version number etc.
Scottish and Southern Energy	<p>_H, _P – Host LDSO areas</p> <p>_A, _B, _C, _D, _E, _F, _G, _J, _K, _L, _M (SOUT Embedded LDSO areas)</p> <p>_N (HYDE Embedded LDSO area)</p>	<p>SSE have expanded on the text around its approach to Out of Area Networks (OOA), to provide further clarity;</p> <ol style="list-style-type: none"> 1) To stipulate that when it has an embedded network to a Host LDSO, and the end customer site is EHV voltage connected, then subject to the availability of settlement data and Host DNO boundary LLFs provision, it could provide a site-specific LLF calculation for such customers. 2) Otherwise it would mirror the Host LDSO generic LLFs, in line with its current approach. 3) For OOA network that connects directly to the Transmission network, site-specific LLFs could also be calculated for EHV end users using the substitution methods described in BSCP guidance, in line with its in-area approach. 4) For OOA network that connects directly to the Transmission network, generic LLFs would be calculated for each voltage level, in line with its in-area approach. <p>SSE do not have OOA customers that require site-specific calculations in either area, so these updates were provided with a view to cover future potential scenarios.</p> <p>The amended text does not change its existing approach to mirror the Host</p>

		DNO's Generic LLFs for HV and LV end users.
Eclipse Power Networks	ALL – Embedded LDSO	No change to how the LDSO intends to calculates LLFs. Only minor amendments such as year, version number etc.
Vattenfall Networks	ALL – Embedded LDSO	No change to how the LDSO intends to calculates LLFs. Only minor amendments such as year, version number etc.

2.6 The table below provides the Host LDSO methodologies that will be mirrored by the Embedded LDSOs for the 2023/24 BSC Year:

Embedded LDSO	Mirroring Host LDSO
Eclipse Power Networks	ALL
The Electricity Network Company	ALL
Last Mile Electricity	ALL
Energy Assets Networks	ALL
ESP Electricity	ALL
Optimal Power Networks	ALL
Fulcrum Electricity Assets	ALL
Harlaxton Energy Networks	ALL
Independent Power Networks	ALL
Leap Electricity Networks	ALL
Murphy Power Distribution	ALL
Scottish Hydro-Electric Distribution	_N
Southern Electric Power Distribution	_A, _B, _C, _D, _E, _F, _G, _J, _K, _L, _M
UK Power Distribution	ALL except _P
Vattenfall Network	ALL
Indigo Power	ALL

3. Next Steps

- 3.1 The methodologies will also be presented to the SVG on 6 September 2022. Once the methodologies are approved by SVG and ISG, Elexon will publish them on the Elexon Portal. All draft methodology statements are available to Committee members on request.
- 3.2 The next milestone for the LLF audit is 30 September 2022, which is the deadline for all Host LDSOs and Embedded LDSOs that are calculating their own LLFs to submit their LLF values for the 2023/24 BSC Year, followed by the LLF calculation audit starting in October 2022.
- 3.3 Once the audit is complete for both Host and Embedded LDSOs, we will ask the ISG and SVG in March 2023 to approve the final LLF values which will go live on 1 April 2023.

4. Recommendations

- 4.1 We invite you to:
 - a) **APPROVE** the Host and Embedded LDSO methodologies;
 - b) **NOTE** that all Embedded LDSOs intend to Mirror Host LDSO Generic LLFs; and
 - c) **NOTE** that the LDSO methodologies will be presented to the SVG for approval at its 6 September 2022 meeting.

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