
Issue 119 Workgroup Meeting 4 Summary

Summary

1. Meeting Objectives

- 1.1 The Chair welcomed attendees and presented the meeting objectives, which were to present:
- Embedded Export and Principle 6;
 - Site-Specific Line Loss Factors;
 - Issue 119 wrap-up recommendations; and
 - Review the red-lined text recommendations.

2. Embedded Export and Principle 6

- 2.1 The member stated that, following discussions held since the previous meeting, they had concluded that Issue 119 continues to serve an important purpose because there remain opportunities to improve the accuracy of line loss factor calculations.
- 2.2 Particular attention was drawn to the treatment of embedded export. The member explained that increasing levels of embedded generation across distribution networks, including rooftop solar and distribution-connected generation, mean that assumptions underlying the current arrangements may no longer reflect actual network behaviour. In their view, the current application of Principle 6 effectively assumes that exported electricity is consumed with no associated losses, which they believe is physically unrealistic and potentially results in losses being understated.
- 2.3 The member emphasised that they were not suggesting embedded generation itself causes losses to increase. Rather, they argued that the methodology used to account for those losses may be incorrect and could create the appearance of rising losses elsewhere in the settlement process. They suggested this may be one of the underlying causes of the concerns that originally prompted Issue 119.
- 2.4 It was acknowledged that local generation can reduce losses where generation and consumption occur close together. However, the member argued that this benefit should not be interpreted as implying zero losses in all cases. They noted that, as power flows over greater distances across the distribution network, losses will inevitably occur.
- 2.5 The member proposed that export LLFs should always remain below import LLFs for the same location and voltage level. While no detailed methodology was put forward, they considered this principle to be more representative of physical reality and suggested that additional industry work is required to determine how revised export LLFs should be calculated.
- 2.6 The member expressed the view that this topic is sufficiently significant to warrant continued industry attention and considered it central to the original objectives of Issue 119.

3. Site-Specific Line Loss Factors

- 3.1 The member also highlighted concerns regarding the current treatment of site-specific LLFs. They observed that site-specific arrangements are intended to provide more accurate settlements than generic LLFs because they are based on detailed information about individual sites.
- 3.2 However, they argued that current methodologies rely on assumptions regarding customer demand at the point the LLF is established and do not adequately reflect subsequent changes in site consumption. Since electrical losses are proportional to the square of current rather than increasing linearly, the member considered that inaccuracies can emerge when large customers significantly change their demand patterns.
- 3.3 The member therefore proposed that the methodology for site-specific losses should better reflect the underlying physics of network losses and should respond more accurately to changing site volumes. Their

intention was not necessarily to create a perfect solution, but rather to improve accuracy while maintaining a practical and proportionate approach.

- 3.4 The member acknowledged that additional factors, including fixed losses and the risk of unintended consequences, would need to be considered. They recognised that further modelling and impact assessment would be required before any proposal could be developed.
- 3.5 The member concluded that both issues represent opportunities to improve settlement accuracy and remove distortions that may create unintended market signals. They stressed that their motivation was not based on commercial advantage but on ensuring that settlement arrangements remain aligned with physical network behaviour and deliver outcomes that support the efficient operation of the electricity system.

4. Wrap-up recommendations

- 4.1 The workgroup reviewed a summary of findings from previous meetings and considered recommendations aimed at implementation ahead of the April 2027 LLF update. Three priorities were identified:
 - reviewing low-voltage non-half-hourly profiling within the LAF model,
 - strengthening the existing audit framework through additional back-testing controls, and
 - investigating whether seasonal approaches to LLF modelling could improve settlement accuracy.
- 4.2 Members reflected on lessons learned throughout the workgroup discussions. It was recognised that technical losses increase disproportionately as network loading rises because losses are related to the square of power flow. The group also acknowledged the existence of non-technical losses, such as theft and settlement errors, although these had not been analysed in detail. Members agreed that all forms of losses should continue to be captured within LLF calculations.
- 4.3 The current audit arrangements were also reviewed. Members noted that existing controls primarily focus on compliance and significant year-on-year changes. Suggestions were made to introduce additional back-casting tests to assess whether revised LLFs would improve alignment between historic losses and resulting GCF outcomes. Members considered that such controls could help identify potential issues earlier in the process.
- 4.4 Analysis presented during the meeting suggested that peak period GCF values remain structurally high despite LLF updates. Members proposed further examination of profiling within the LAF model to determine whether improvements could be made. Alternative approaches, including increasing the number of seasonal time-of-day bands, were also discussed.
- 4.5 The group further considered seasonal differences in network losses, particularly the impact of embedded solar generation. Potential options included operating separate summer and winter models or increasing the number of settlement periods used within existing arrangements. Members agreed that further modelling and impact assessment would be necessary before deciding on the most appropriate approach.
- 4.6 The meeting concluded with agreement that both the embedded export issue and the site-specific LLF proposals warranted further consideration outside the current workgroup. Members supported continued efforts to improve the accuracy and transparency of line loss calculations while ensuring that any future changes remain practical and proportionate. Further discussions would take place to determine the most suitable mechanism for progressing these issues.

5. Next steps

- 5.1 The workgroup agreed that the highest priority should be further investigation of the treatment of embedded export within current LLF arrangements. Members considered this to be the most material unresolved issue identified through Issue 119 and recognised that increasing levels of distributed generation mean that existing assumptions may no longer accurately reflect physical network losses. Further industry work is therefore required to develop an appropriate methodology and determine the most suitable route for progressing the issue through existing governance processes.
- 5.2 The next priority identified was a review of low-voltage non-half-hourly (LV NHH) profiling within the Loss Adjustment Factor (LAF) model. Members agreed that a focused technical review should be undertaken to improve understanding of how profiling currently operates and whether it contributes to the persistent

divergence observed between LLF values and Grid Correction Factor outcomes during peak periods. This work should involve collaboration between suppliers, DNOs and Elexon.

- 5.3 Members also agreed that the existing LLF assurance framework could be strengthened. Consideration should therefore be given to introducing additional audit controls, including back-testing of proposed LLF updates against historic settlement data. Such controls would provide greater confidence that revisions improve settlement outcomes and would allow material deviations to be identified and explained more effectively.
- 5.4 Members recognised that changes in customer demand over time can reduce the accuracy of existing site-specific calculations and agreed that alternative approaches should be explored. Any proposals should be supported by impact assessments and should consider both fixed and variable losses to ensure that unintended consequences are avoided. The workgroup also recommended further analysis of seasonal approaches to LLF modelling. Members noted that losses differ significantly between summer and winter periods and agreed that options such as separate seasonal models or an increased number of seasonal time-of-day bands should be examined to determine whether they could improve settlement accuracy.
- 5.5 Across all proposed areas of work, members agreed that detailed modelling and testing using real network examples would be required before any recommendations could be formalised. This analysis should quantify the benefits of each proposal and assess the practical implications of implementation.
- 5.6 Finally, Elexon and interested parties will need to determine the most appropriate governance arrangements for progressing each workstream. Members agreed that resources should initially focus on those areas expected to deliver the greatest benefit to settlement accuracy, to implement any feasible improvements as part of the April 2027 LLF update cycle.