ELEXON

Issue 119 Workgroup Meeting 1 Summary

Summary

1. Meeting Objectives

1.1 The Chair welcomed attendees and presented the meeting objectives:

- Introduce the Issue and its dependencies;
- Discuss the current work Elexon does to calculate and audit Line Loss Factors (LLF); and
- Discuss how Settlement Errors can impact LLFs and how they are accounted for.

2. Understanding and assurance of increasing electricity losses (LLF & GCF)

2.1 OVO introduced the Issue as they were seeking to address the growing concern in the energy industry regarding rising electricity losses. These losses, particularly reflected in LLFs and Group Correction Factors (GCFs), have increased significantly over the past five years, from 8.6% to 10.6%. This rise is challenging to explain and affects market participants unevenly, raising concerns about financial risk and diminishing confidence in the settlement system. This is especially pertinent in light of the upcoming Market-Wide Half-Hourly Settlement (MHHS) implementation.

2.2 OVO presented that GCFs have risen from 0.6% in 2019 to 1.8% by 2023, with nearly all Grid Supply Point (GSP) Groups showing an upward trend in losses, though the rate of increase and patterns vary. In GSPs where LLFs changed significantly, GCFs tended to shift inversely. However, GSPs with static LLFs still experienced rising GCFs, indicating potential delays or inaccuracies in the methodology.

2.3 Although Elexon conducts audits of LLF calculations to ensure compliance, there are still persistent unexplained changes in GCFs. These issues are often highlighted by Annual Demand Ratio (ADR) breaches that are difficult to resolve. The workgroup discussed the significant financial impact of excluding GCF from Ofgem's Default Tariff Price Cap, which is estimated at £1.2 billion. This exclusion results in an under-recovery of costs for domestic suppliers.

2.4 A case study suggested that historical under-reporting of GSP Group Take may have led to understated LLFs and inflated GCFs. However, this situation would not be classified as a formal Settlement Error under current Balancing and Settlement Code (BSC) rules.

2.5 OVO suggested that the WG should consider the following questions in the coming meetings:

- Why are losses rising across GSPs at different rates?
- Should LLF methodology or approval be revised?
- Does the use of historic data create lag/inaccuracy?
- Should GCF costs be allowed in the price cap?
- How can we better ensure the accuracy of data going into LLF calculations?

3. Crystallised Settlement Error and Generic LLFs

3.1 Elexon presented its examination ofhow historical inaccuracies in the data used to calculate Generic LLFs can lead to inflated Group Correction Factors (GCFs), even when current data is accurate. The main issue highlighted was that the LLFs are based on Settlement data from three years prior, as mandated by BSCP128 (Production, Submission, Audit & Approval of Line Loss Factors)[1]. Once these LLFs are established, they cannot be retrospectively modified, even if the underlying data later proves to be incorrect.

3.2 Elexon presented a worked example showing that if the Group Take from the GSP (GSPGT) was historically under-reported, the calculated LLFs would be lower than they should be, resulting in underestimated losses.

[1] BSCP128: Production, Submission, Audit & Approval of Line Loss Factors - Elexon Digital BSC

These "missing" volumes would then be included in the GCF, causing it to inflate. Although this situation would not qualify as a Settlement Error under current BSC rules, it causes a systemic shift in how volumes are attributed.

3.3 Elexon noted that the current GCF weightings meant that the “missing” volumes would be allocated more-or-less proportionately between Suppliers. Whilst not perfect, this might still be the most appropriate way to mutualise the cost of the unaccounted volumes, given the complexity, expense and risk of re-calculating the entirety of SVA volumes for a single GSP Group – something that would require significant concerted action by multiple market participants at the same time to accomplish.

3.4 The audit process ensures that LLFs adhere to the approved methodology but does not address inaccuracies in upstream data. The WG raised critical questions: Is the current LLF calculation method still suitable? Are GCFs the best approach for managing residual errors? And how can we enhance confidence in the accuracy of input data, particularly concerning GSPGT?

4. LLF Audit Process and LLF Methodology

4.1 Elexon explained the LLF Methodology and LLF Audit Process. This included detailing the key methodology principles used when calculating LLFs, such as:

4.2 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.

- All Site Specific LLFs shall account for Technical Losses only.
- All Generic LLFs shall account for all losses (Technical and Non Technical).
- Site Specific losses and the total Grid Supply Point Group (GSPG) losses shall be considered in the calculation of Generic LLFs.
- As a minimum, Generic LLFs shall be calculated separately for Day and Night.
- 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 3 years prior to the BSC Year for which the LLFs are being calculated.
- Robust error detection and correction processes shall be in place throughout the calculation and submission of LLFs.
- All Generic LLFs shall be recalculated at least every 2 years.

4.3 Elexon presented the LLF audit process and how it ensures compliance with BSCP128 by reviewing documentation, sampling customer types and voltage levels for recalculated LLFs, identifying anomalies through value checks, and comparing historical data for deviations. It also verifies that approved LLFs are accurately assigned to MPANs and implemented in settlement systems.

4.4 The WG highlighted several limitations of the LLF audit process that affect its effectiveness. It is sample-based, so not all LLFs are reviewed, risking undetected errors. The methodology also relies on outdated historical data, which may not reflect current network conditions. Additionally, it does not separate technical and non-technical losses, making it hard to quantify theft. Updating LLFs is restricted to obvious "manifest errors," and even significant inaccuracies identified post-Final Reconciliation cannot be recalculated, which may embed errors in the settlement process.

5. Next steps

5.1 The agreed next steps were to continue exploring the issues discussed, such as:

- Should LLF calculation principles be updated to reflect the modern network (EVs, solar, etc.)?
- How should GCF weightings be adjusted to ensure fairness?
- Could better integration of LLF and GCF trends reduce volatility or risk?
- How should the industry address theft and unaccounted energy more transparently?

- Ofgem to investigate how Suppliers could recover costs from LLF and GCF in the price cap.

5.2 Elexon agreed to support these questions through analysis on LLF Methodology Principles for the WG to discuss in the future sessions.