

APPROVED 2024/25 Transmission Loss Adjustment Factors (TLAFs)

Accompanying Note

Version 1.0

27 August 2024



1. Background

This explanatory paper has been prepared by the Transmission System Operators (TSOs) to accompany the Transmission Loss Adjustment Factors (TLAFs) which have been calculated by the TSOs, based on the approved TLAF methodology (SEM-12-049), for 2024/25 (1st October 2024 to 30th September 2025).

This set of TLAFs was issued for industry comment on 24 June 2024. The Regulatory Authorities have subsequently approved these TLAFs on 23 August 2024.

TLAFs for interconnectors under the revised SEM arrangements are detailed in the I-SEM Interconnector Losses Information Paper published 2nd June 2017.

2. TLAF Analysis - Overview

Following a comparison between 2023/24 and 2024/25, it was found that most nodes have seen their TLAFs increase. 83% of the TLAFs calculated are within 1% of the previous year's TLAFs and over 99% are within 2%. The maximum average participant TLAF change is 2.41%. The overall average TLAF has increased by 0.31% from 2023/24.

The normal distribution and the frequency distribution are shown below in Figure 1 and Figure 2 respectively.

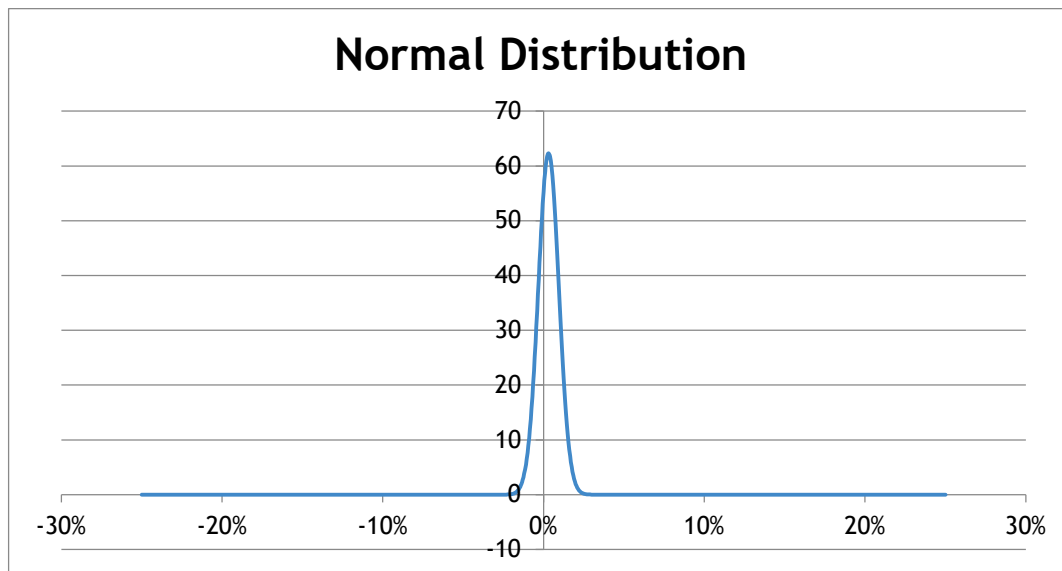


Figure 1 - Normal Distribution of changes in TLAFs from 2023/24 to 2024/25

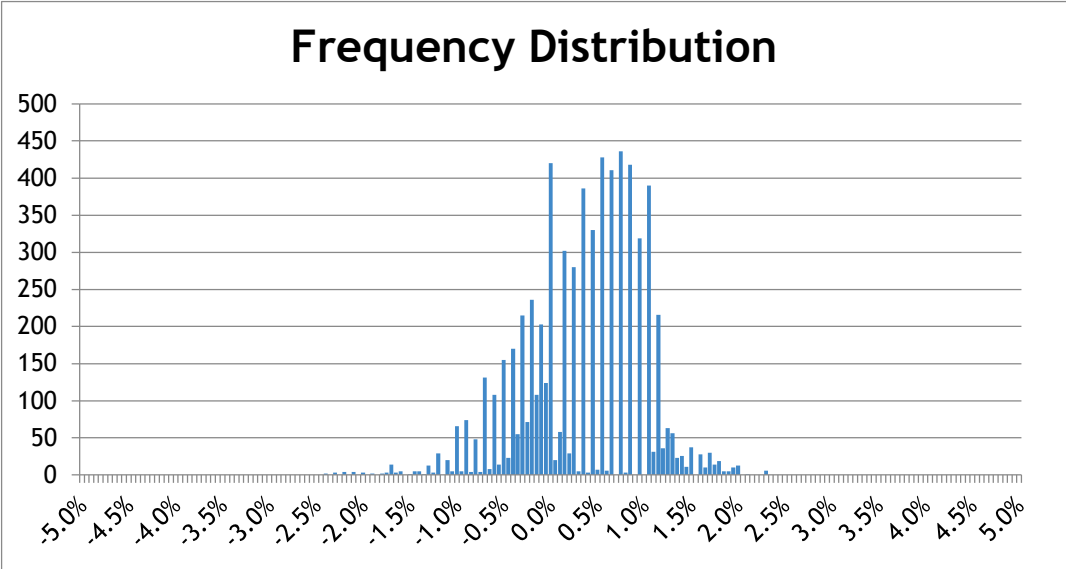


Figure 2 - Frequency Distribution of changes in TLAFs from 2023/24 to 2024/25

3. TLAF Analysis - Regional

There is a reasonable link between regional dispatch change and the TLAF trend in that region. It should be noted that whilst changes in dispatch between years will change base case flows, this does not indicate how a single participant's generation will add to, or offset, flows on an all-island basis. Instead, it may provide an indicator for possible expected regional changes.

There has been a change in direction of interconnector power flows assumed in the models between 2023/24 and 2024/25. The interconnectors have changed from being a net exporter to a net importer. This increase in interconnector imports is likely to be a reason why the overall model losses have decreased in 2024/25 compared to 2023/24. With greater interconnector imports assumed in the model, they suppress the requirement for more remote generators to support the demand centres.

The TLAFs in the west have increased in 2024/25 compared to 2023/24. There is less generation assumed on the west coast in 2024/25 compared to 2022/23. This is due to a combination of less thermal generation and wind generation assumed in the west region in 2024/25. This gives rise to higher TLAFs in the west in 2024/25 compared to 2023/24.

The TLAFs in the Southeast have decreased in 2024/25 model compared to 2023/24 TLAFs. This is likely due to an increase in the generation in this region predominantly due to the introduction of Greenlink in the TLAF model this year.

The TLAFs on the west tend to be lower than those on the east. This shows that the TLAF model is providing a valid signal, as it aligns with the expectation that generators contributing more to transmission losses due to their location should have a correspondingly lower TLAF.

Figure 3 shows an all-island overview of the TLAFs for 2024/25, indicating the locational range. Green signifies nodes with high TLAFs, while red signifies nodes with lower TLAFs.

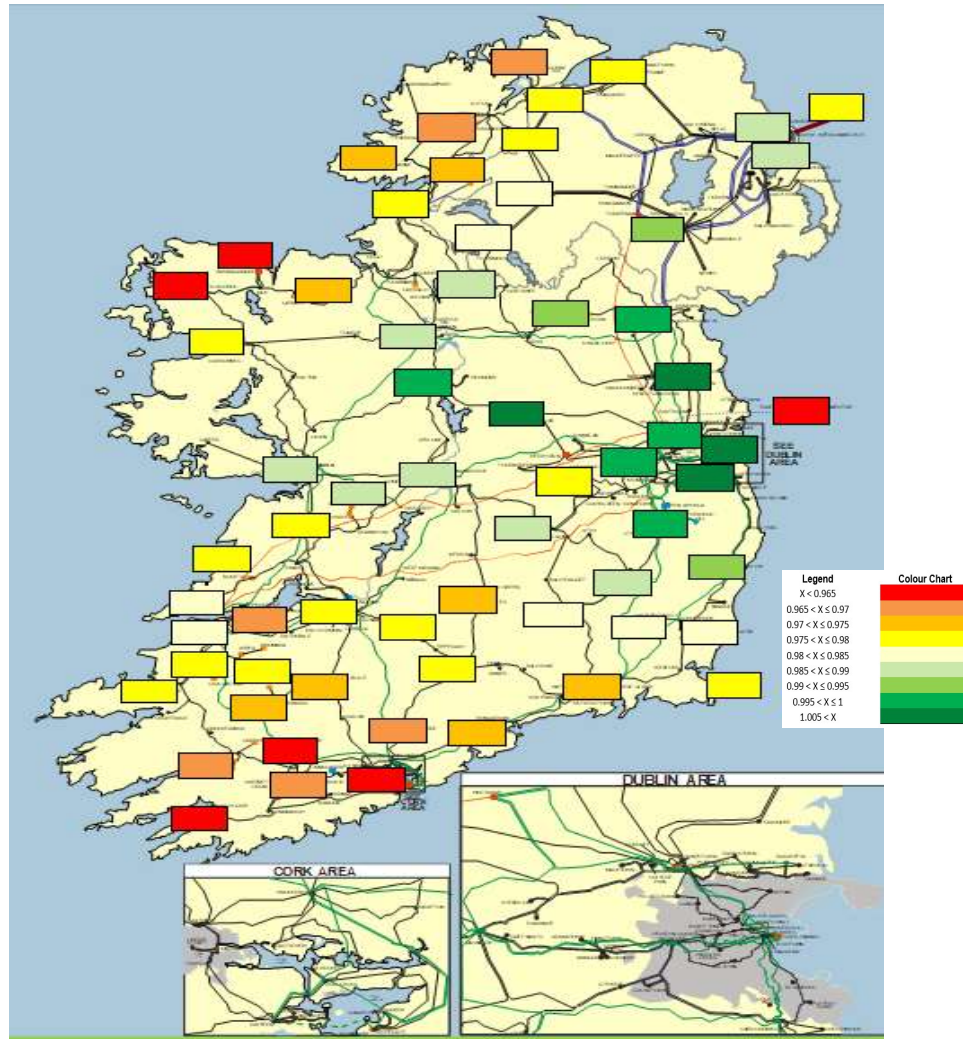


Figure 3 - Locational breakdown of 2024/25 TLAFs

The change in TLAFs from 2023/24 to 2024/25 is shown in Figure 4. Yellow signifies nodes where TLAFs have decreased from their respective values in 2023/24, with dark orange representing the largest change. Green represents the node with an improvement, while white block represents no significant change. EWIC, Moyle and Greenlink TLAFs, highlighted in purple, are fixed as per the I-SEM Interconnector Losses Information Paper. The main observation from this graph is that:

- the average TLAFs have increased on an all-island basis from their respective values in 2023/24.
- TLAFs on the west coast have improved in 2024/25 model compared to 2023/24 TLAFs
- TLAFs in southeast have decreased in 2024/25 model compared to 2023/24 TLAFs
- TLAFs in NI and along mid-east coast have had relatively small change

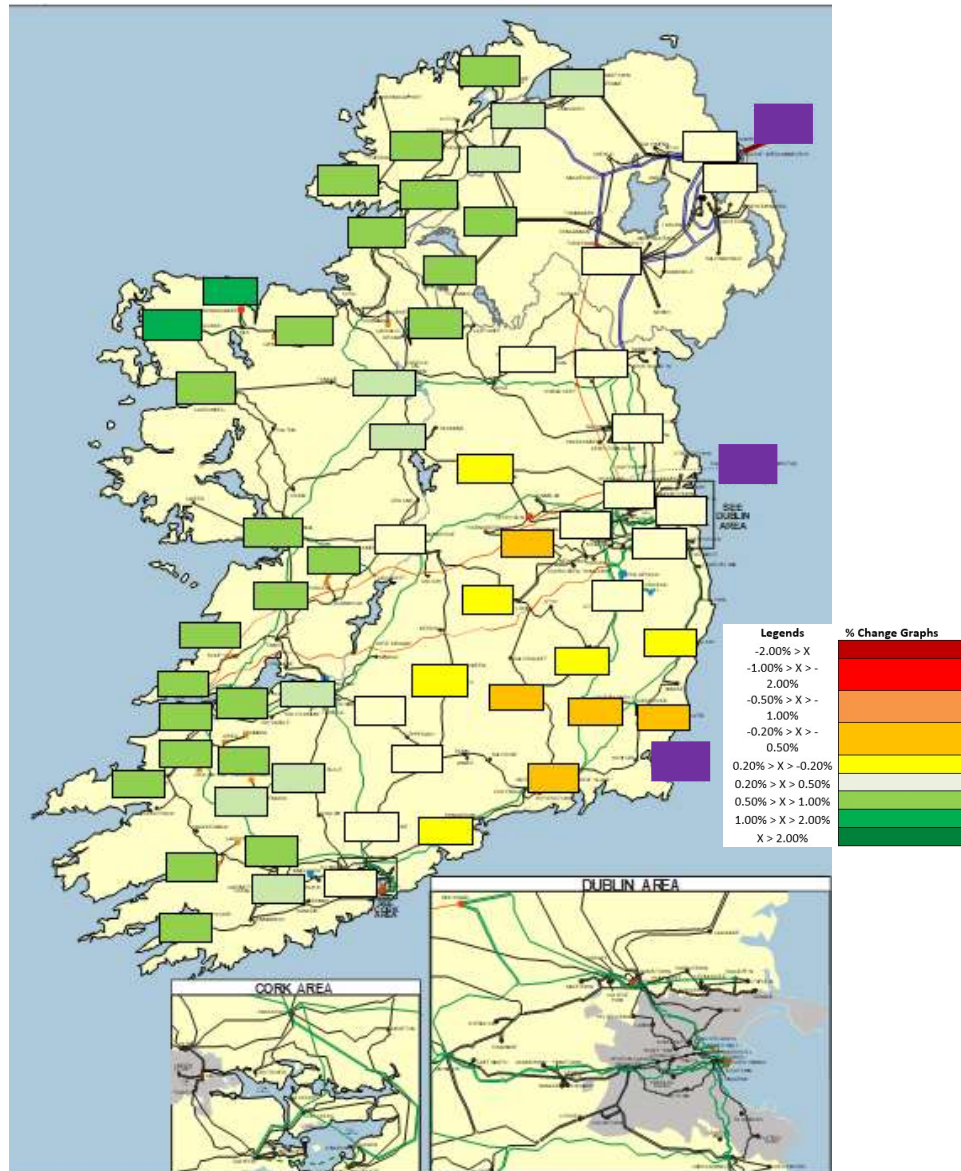


Figure 4 -TLAF changes from 2023/24 to 2024/25

Figure 5 shows the total regional MW dispatch change, inclusive of the interconnector imports from 2023/24 to 2024/25. For commercial sensitivity reasons, data is shown at a regional level, and aggregated from all generation types, (thermal, wind, solar, etc.)

As previously stated, although regional changes from one year to the next can be generalised using Figures 4 and 5, they should not be used as the single determinant for TLAF changes. A participant's TLAFs are a result of how generation at its node will offset, or add to, all-island base case flows.

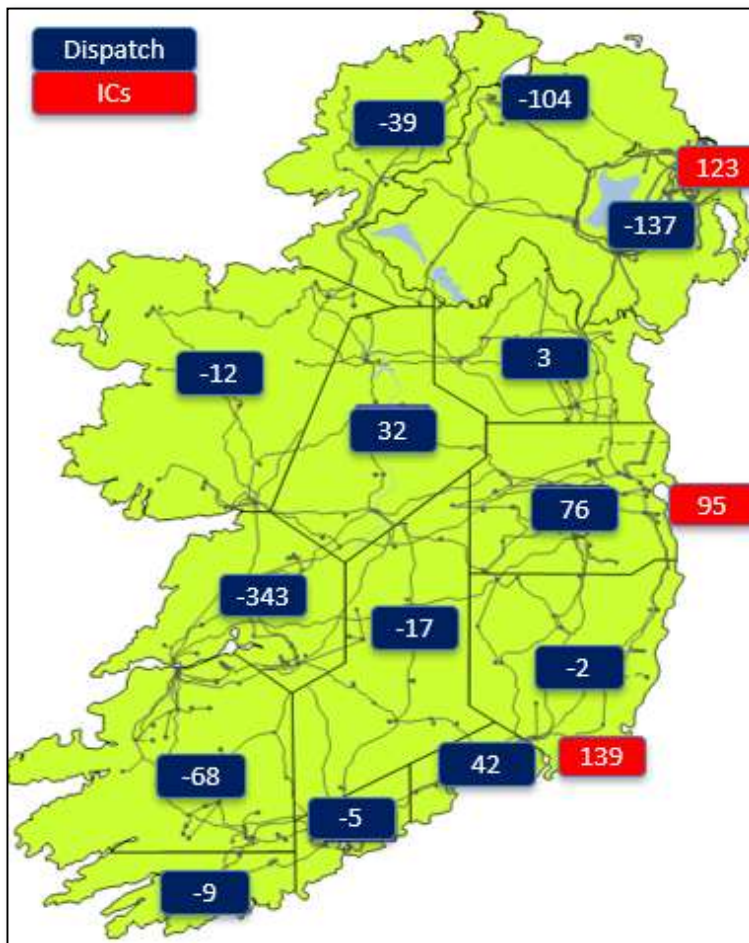


Figure 5 - Total regional MW dispatch change from 2023/24 to 2024/25

Contact

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