

Proposed 2023/24 Transmission Loss Adjustment Factors (TLAFs)

Accompanying Note

Version 2.0

23 August 2023



1. Background

Following the publication of the Proposed TLAFs for 2023/24, a customer raised concerns through the public commentary period about the inconsistency in the TLAFs for their assets and in general, where-in their TLAFs decreased sharply for the period from April 2024 onwards. The customer indicated a possibility of an error with the TLAF calculations. Based on the feedback received, the TSOs have carried out a detailed investigation on the TLAF calculations, its methodology, assumptions and inputs and hence acknowledge errors in the calculation of the Proposed TLAFs 2023/24 v2.0, published on the TSOs website on 30 June 2023. The TSOs thank the customer for their engagement and apologise for the error. Revised TLAF calculations have been published on the TSOs website.

TSOs have traced the source of error to a summer network file which is used as an input for TLAF calculations and is extracted from a database. On closer investigation it was discovered that some loads were incorrectly classified in the summer network file. As per the methodology, for TLAF calculations, system demand is increased by 5 MW and reduced by 5MW to calculate the Marginal Loss Factor (MLF). However, an issue with the summer network files has caused the system demand to increase/reduce by a greater amount than 5MW which impacted the TLAFs. The TSOs will correct the error in the source database so that this will not occur again, and update our quality assurance processes.

This explanatory paper has been prepared by the Transmission System Operators (TSOs) to accompany the proposed Transmission Loss Adjustment Factors (TLAFs) which have been calculated by the TSOs, based on the approved TLAF methodology (SEM-12-049), for 2023/24 (1st October 2023 to 30th September 2024). TLAFs for interconnectors under the revised SEM arrangements are detailed in the I-SEM Interconnector Losses Information Paper published 2nd June 2017.

In the revised set of calculations published on the TSOs websites, Proposed TLAFs 2023/24 V3.0, this error has been rectified and the TLAFs are at a more consistent level throughout the year in line with the high level principles of TLAFs and changes in the other factors. The TLAFs for most of the market participants have changed, particularly for the second half of the year, i.e., from April 2024. However, it is to be noted that there is no change in the dispatch, interconnector flows, demand and wind generation as compared to the publication in June and these have been described subsequently.

2. TLAF Analysis - Overview

Following a comparison between 2022/23 and 2023/24, it was found that most nodes have seen their TLAFs decrease. 79% of the TLAFs calculated are within 1% of the previous year's TLAFs and over 91% are within 2%. The maximum average participant TLAF change is 2.21%. The overall average TLAF has decreased by 0.61% from 2022/23.

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

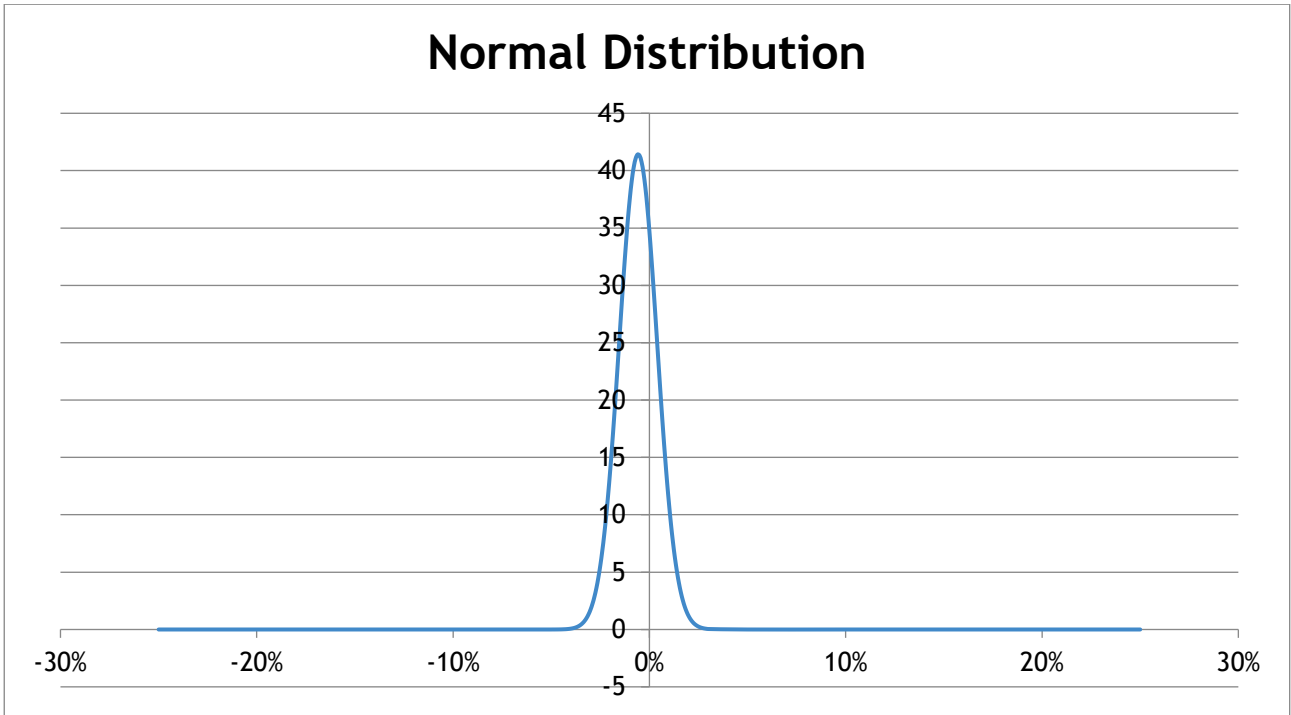


Figure 1 - Normal Distribution of changes in TLAFs from 2022/23 to 2023/24

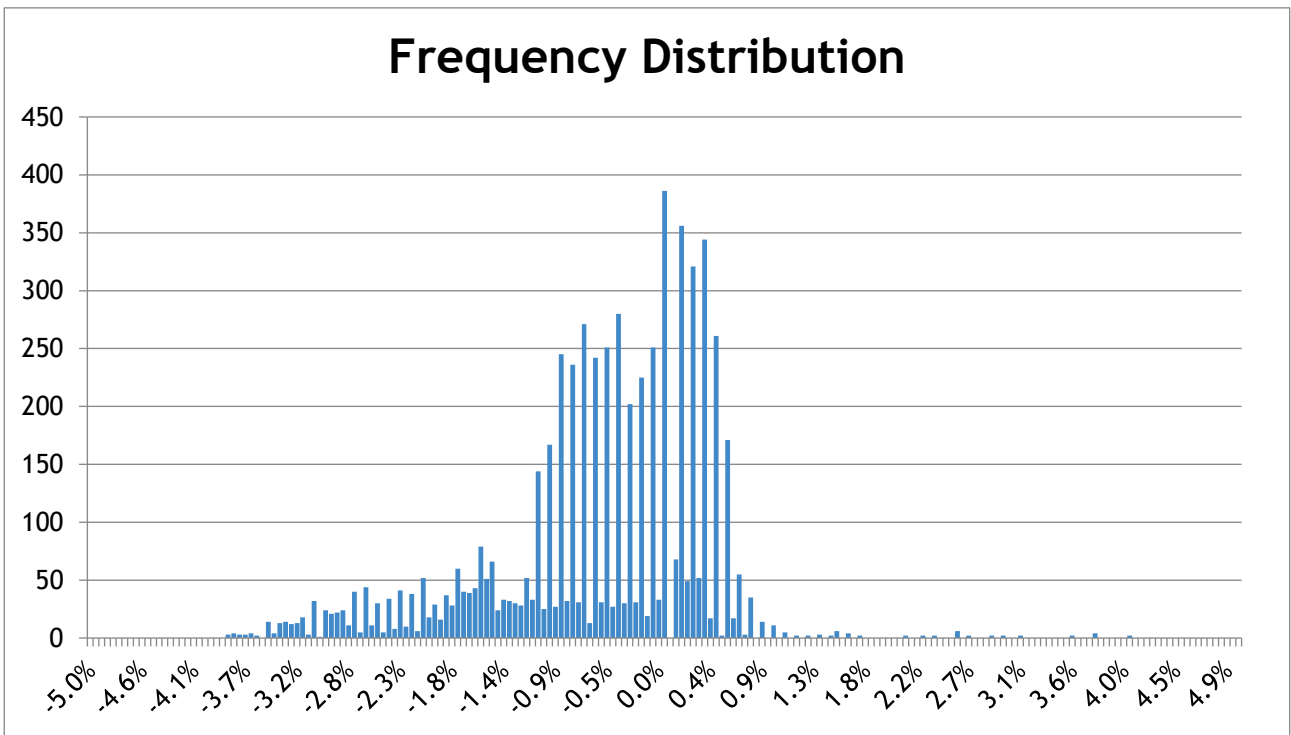


Figure 2 - Frequency Distribution of changes in TLAFs from 2022/23 to 2023/24

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.

Figure 3 shows an all-island overview of the TLAFs for 2023/24, indicating the locational range. Green signifies nodes with high TLAFs and moving to red signifies nodes with lower TLAFs.

The Interconnectors (EWIC and Moyle) have seen a reversal in the direction of power flow from 2022/23 to 2023/24. EWIC has changed from being a net importer to net exporter with a net change of circa 90 MW. Moyle has changed from being a low net importer to a higher net exporter, with a delta of circa 121 MW. When the interconnectors export more, they increase the requirement from generators to support the data centres, and this is seen on an all-island basis.

The changes outlined above have resulted in a tendency for increased flows from North-South and on an almost all island basis to support the all-island demand as a result of interconnectors exporting in 2023/24, compared with that in 2022/23. This increase in flows on an almost all-island basis is reflected in the decrease in the all-island average TLAF.

Figure 3 shows an all-island overview of the TLAFs for 2023/24, indicating the locational range. Green signifies nodes with high TLAFs and moving to red signifies nodes with lower TLAFs.

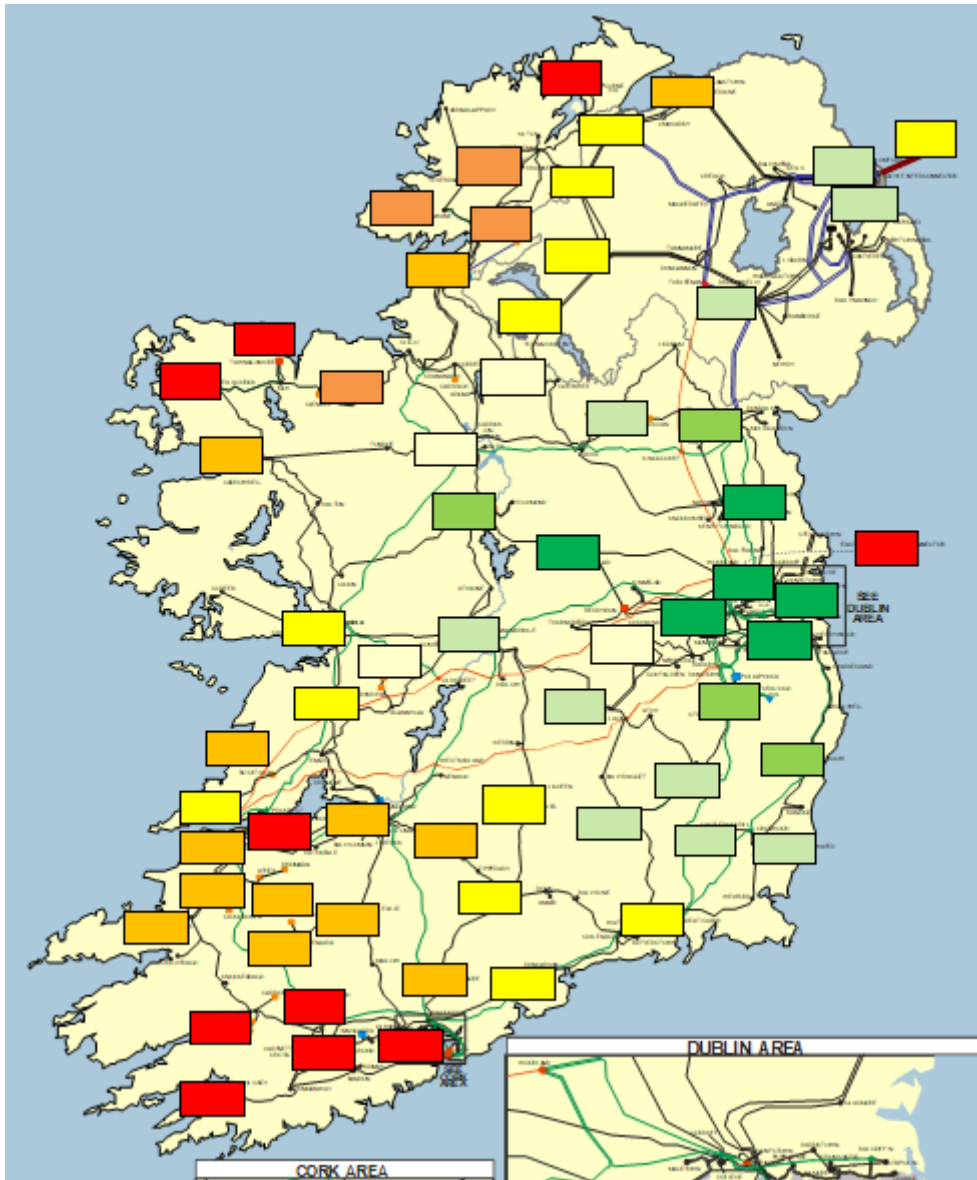


Figure 3 - Locational breakdown of 2023/24 TLAFs

The change in TLAFs from 2022/23 to 2023/24 is shown in Figure 4. Yellow signifies nodes where TLAFs have declined from their respective values in 2022/23, with dark orange representing the largest change. The average TLAFs have decreased on an all-island basis from their respective values in 2022/23, as a result of interconnectors exporting. EWIC and Moyle TLAFs, highlighted in purple, are fixed as per the I-SEM Interconnector Losses Information Paper.

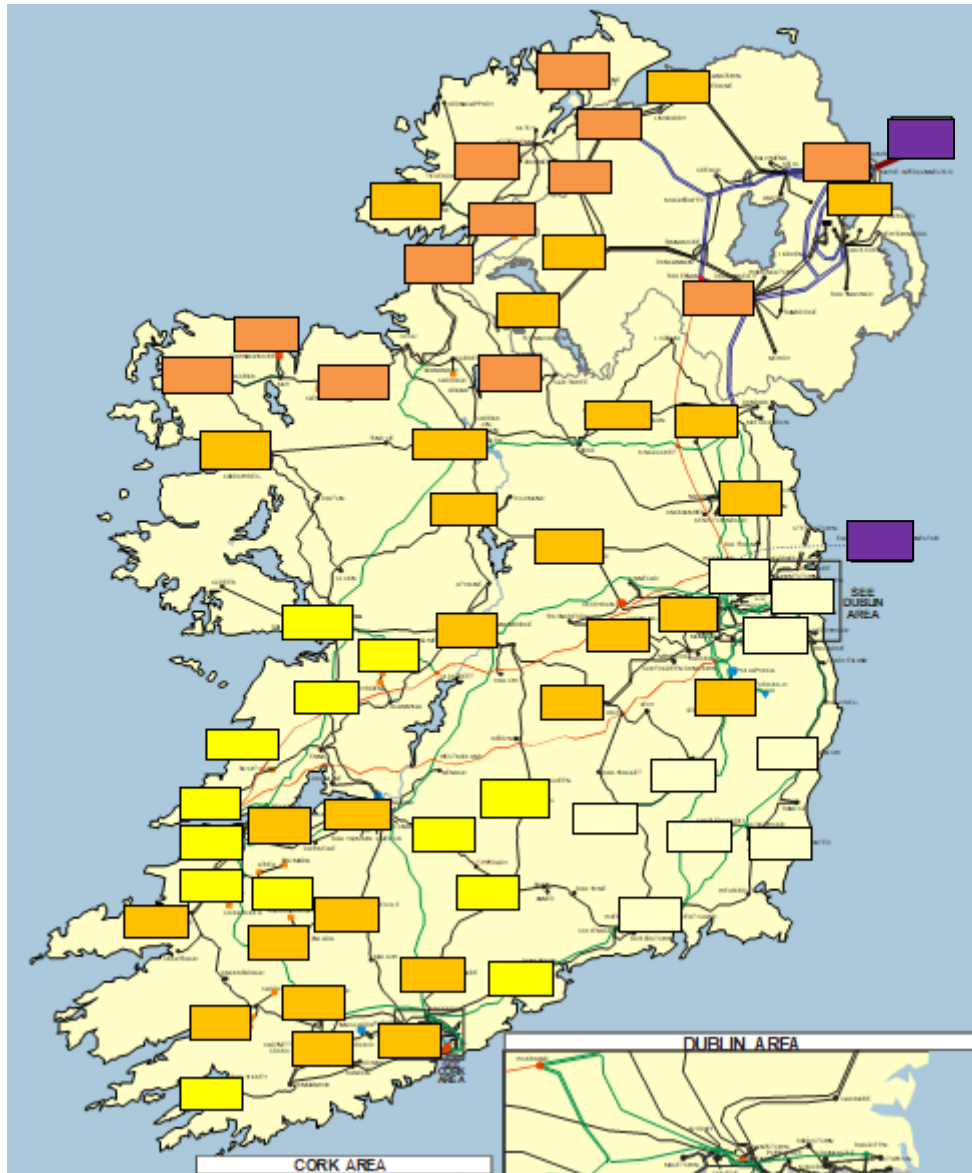


Figure 4 -TLAF changes from 2022/23 to 2023/24

Figure 5 shows the total regional MW dispatch change, inclusive of the interconnector exports from 2022/23 to 2023/24. 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.

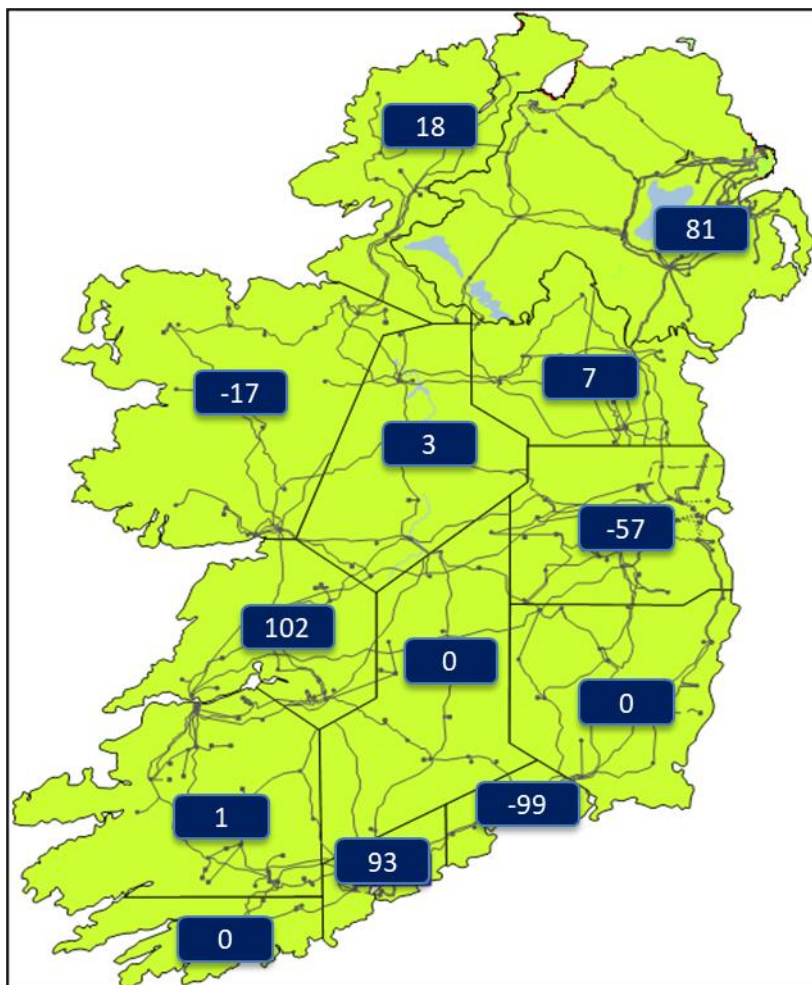


Figure 5 - Total regional MW dispatch change from 2022/23 to 2023/24

Contact

If you have any queries or comments on the Proposed 2023/24 TLAfs please E-mail: Tariffs@EirGrid.com or Tariffs@soni.ltd.uk by COB on 04th September 2023.