Cascale

Higg FEM 2025 GHG and Energy Comparability Guidance

Summary

This document outlines key considerations for users of Higg FEM data regarding the comparability of the Higg FEM 2024 and Higg FEM 2025 energy usage and GHG emissions models. It is intended for stakeholders who rely on FEM energy or GHG data for external reporting, performance monitoring, or other applications where year-over-year comparisons are required.

In particular, the document may be of value to users incorporating Higg FEM data into external reporting, where it is essential to communicate methodological changes to relevant stakeholders. This ensures that the implications of these changes are clearly understood and appropriately reflected in reporting and analysis.

Changes to Higg FEM 2025 that Impact Comparability

1. Emission factors were changed based on improved modelling and sources for chilled water, district heating, fabric waste, liquified petroleum gasses/propane, petrol, renewables of unknown source, and purchased steam.
2. The models for energy intensity of the district heating and chilled water energy sources have changed to better align with industry and global models.
3. Where an FEM reports the mix of biomass fuel sources those figures are now used to calculate the emission factor of biomass usage.

In all cases, guidance about the specific changes that is detailed enough to replicate and be used in technical reporting can be found in the ***Higg FEM 2025 Energy Source Change*** resource, to be available with the Higg 2025 release.

Reporting Guidance

The calculation *ghg_emissions_increase_from_2024_model_percent* will give the percentage change *from* the 2024 model to the 2025 model for individual Higg FEMs **for these emission factor model changes only.** The calculation does not include emission factor changes due to updated data, such as electricity. Please review the below scenarios for calculation examples:

- If the 2025 model gives 1.1 MT of emissions and the 2024 model would have given 1 MT of emissions for the same Higg FEM, then the value of ghg_emissions_increase_from_2024_model_percent will be 10.
- If the 2025 model gives 0.9 MT of emissions and the 2024 model would have given 1 MT of emissions for the same Higg FEM, then the value of ghg_emissions_increase_from_2024_model_percent will be -10.
- If the 2025 model gives 1 MT of emissions and the 2024 model would have given 1 MT of emissions for the same Higg FEM, then the value of ghg_emissions_increase_from_2024_model_percent will be 0.

The formula is the MT of emissions given by the 2025 model divided by the MT of emission given by the 2024 model minus 1 times 100. **It is recommended that, in contexts where Higg FEM emission calculations are used for year on year comparisons, that the change based on modelling be communicated.**

Cascale does not recommend rebaselining due to this methodological change because the impacts are not likely to be significant for most use cases and back casting the methodology change to FEM 2024 would need to be done manually. Instead, the relative difference can be reported.For example, a footnote to a year on year comparison of data that includes Higg FEM emissions might read:

> *"Changes in the reported facility GHG emissions are partially due to updated emissions factors based on improved modelling. Isolating these changes accounts for a [ghg_emissions_increase_from_2024_model_percent] difference in reported emissions."*