

T&D Europe Position Paper on a Commission Working Document with regard to small, medium and large power transformers (15th July 2013)

Brussels, 2nd August 2013

The European transformers manufacturing industry represented by T&D Europe thanks the European Commission for giving stakeholders a new opportunity, in the framework of the Interservices Consultation, to provide comments to the preparation of its regulation on Eco-design for small, medium and large power transformers.

1. Scope

T&D Europe proposes that “Phase shifter transformers” are added to the list of categories of transformers excluded from the scope

2. Definitions

T&D Europe recalls its position paper of 6th December 2012 in which we said that “definitions should be aligned with the definitions contained in the relevant EU standards”. The relevant standard is EN 60076-1, **knowing that some definitions are not fully aligned. T&D Europe will provide a correction at a later stage.**

3. Annex 1a Table I.3: Correction of load and no load losses in case of other combinations of winding voltages or dual voltage in one or both windings (rated power \leq 3150kVA)

T&D Europe proposes one amendment:

In the explanations in the other column, there is nothing about a transformer with a MV winding with two voltages available from a tap and one LV winding voltage, e.g. 20000V-15000V /400V. T&D Europe therefore proposes to add the following sentence: **In case of transformers with one MV winding with a two voltage available from a tap; the maximum available power on the lower MV voltage on such transformers shall be limited to 0.85 of its nominal rated power.**

The table then would read:

One winding with $U_m \leq 24$ kV and the other with $U_m > 1,1$ kV	The maximum allowable losses in Tables I.1 and I.2 can be increased by 10% for no load losses and by 10% for load losses
One winding with $U_m = 36$ kV and	The maximum allowable losses in Tables I.1 and I.2 can be increased by 15% for no load losses and by 10% for load losses

the other with $U_m \leq 1,1$ kV	
One winding with $U_m = 36$ kV and the other with $U_m > 1,1$ kV	The maximum allowable losses indicated in Tables I.1 and I.2 can be increased by 20% for no load losses and by 15% for load losses
Case of dual voltage on one winding	In case of transformers with one MV (Medium Voltage) winding and two voltages available from a tapped LV (Low Voltage) winding, losses shall be calculated based on the higher LV voltage and shall be in compliance with the maximum allowable losses in Tables I.1 and I.2. The maximum available power on the lower LV voltage on such transformers shall be limited to 0.85 of its nominal rated power.
	In case the full nominal power is available regardless of the combination of voltages, the levels of losses indicated in Tables I.1 and I.2 can be increased by 15% for no load losses and by 10% for load losses. In case of transformers with one MV winding with a two voltage available from a tap; the maximum available power on the lower MV voltage on such transformers shall be limited to 0.85 of its nominal rated power.
Case of dual voltage on both windings	The maximum allowable losses in Tables I.1 and I.2 can be increased by 20% for no load losses and by 20% for load losses for transformers with dual voltage on both windings. The level of losses is given on the basis that the rated power is the same regardless of the combination of voltages.