

Low frequency Neutral Point Currents

Low frequency currents, e.g. geomagnetically induced currents (GIC), can cause power quality issues in the power transmission grid. Especially power transformers can already be sensitive to low frequency currents with amplitudes of several amps. In the joint research project, with the Austrian transmission grid operator and Siemens power transformers, TU Graz investigates the effects on power transformers and develop guidelines how to deal with different levels of LFC in the grid. For this purpose measurement systems are installed to correlate measurement with simulation.



Fig. 1: Transformer lab test

Lab tests with 0.4/35 kV power transformers help to draw conclusions of LFC effects for large power transformers.



Fig. 2: Transformer Neutral Measurement

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