

## Analysis of Ferroresonant Overvoltages in Cable-fed Transformers

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**Abstract :** This paper investigates the impacts of cable length and capacity of transformer on ferroresonant overvoltage in cable-fed transformers. The study was conducted by simulation using the EMTP RV. Results show that ferroresonance can cause dangerous overvoltages ranging from 2 to 5 per unit. These overvoltages impose stress on insulations of transformers and cables and subsequently result in system failures. Undertaking Basic Multiple Regression Analysis (BMR) on the results obtained, a statistical model was obtained in terms of cable length and transformer capacity. The model is useful for ferroresonant prediction and control in cable-fed transformers.

**Keywords :** ferroresonance, cable-fed transformers, EMTP RV, regression analysis

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