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Feasiblity of Replacing Inductive Instrument Transformers with Non-Conventional Intrument Transformers to replace

Authors : David A. Wallace, Salakjit J. Nilboworn

Abstract : Secure and reliable transmission and distribution of electrical power is crucial in today's ever-increasing demand for electricity. Traditional methods of protecting the electrical grid have relied on relaying systems receiving voltage and current inputs from inductive instruments transformers (IT). This method has provided robust and stable performance throughout the years. Today with the advent of new non-conventional transformers (NCIT) and sensors, the electrical landscape is changing. These new systems have to ability to provide the same electrical performance as traditional instrument transformers with the added features of data acquisition, communication, smaller footprint, lower cost and resistance to GMD/GIC events.

Keywords : non-conventional instrument transformers, digital substations, smart grids, micro-grids
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