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VOLTAGE CONTROL IN MICROGRIDS

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ABSTRACT

Generation in a MicroGrid may be limited by voltage rise. Vacuum switch on-load-tap-changers (OLTC), recently developed for MV/LV transformers, can be coordinated with active and reactive power control to increase power generation while reducing voltage excursions. A multi level control scheme was investigated. It is based on local measurements and a single communication link between the transformer OLTC controller and a selected MicroSource. The control method is then expanded to operate with many MicroGrids and Passive Distribution Feeders connected to the same distribution transformer.