

INFLUENCE OF TRANSFORMER TAP CHANGER ON VOLTAGE STABILITY

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ABSTRACT

Electricity market activities and a growing demand for electricity have led to heavily stressed power system. This requires operation of the network closer to their stability limits .Power system operation of the network closer to stability related problems, leading to unpredictable system behavior. Voltage stability refers to the ability of the system to sustain appropriate voltage levels through large and small disturbances. Steady state voltage stability is concerned with limits on the existence of steady state operating points for network. Facts devices can be utilized to increase the transmission capacity, the stability margin and dynamic behavior or serve to ensure improved power quality. The main capabilities are reactive power compensation, voltage control and power flow control. The proposed work is done with on load tap changer, as tap changer is one of the devices used to control the voltage. The algorithm is developed for voltage level control with on load tap changer operation. Normally the tap changer operation is done manually nowadays but the main purpose of this work is to show the effect of tap changing on voltage stability.