Thesis Title : An Optimal Tie Transformer Tap Setting and Capacitor Bank Sizing for Minimization of Transmission Loss in EGAT System : Region 2

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ABSTRACT

This thesis presents an application of non-linear multivariable optimization technique to reduce the power loss of EGAT system region2. The worldwide PSS/E program, used for power system analysis, is modified to incorporate the control of tie transformer tap setting and capacitor bank sizing to minimize the system losses. Study results show that with optimal tap setting and correct capacitor bank sizing, the total loss of system can be reduces by 3-6 MW. which is about 3-6 percent of all losses.