

DAMPING OF OSCILLATIONS OF MULTI MACHINE POWER SYSTEM BY USING SHUNT FACTS DEVICES

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Abstract

Shunt Flexible AC Transmission System (FACTS) devices such as Static Var Compensator (SVC) and Static Synchronous Compensator (STATCOM) play an important role in power systems to improve the transient stability in addition to control the reactive power flow and maintain the voltage at a specified level. This paper deals with the improvement of the transient stability by damping the rotor oscillations by using shunt FACTS devices in multi machine power system. To achieve this combined Fuzzy Logic Controlled (FLC) Voltage Regulator with FLC Bang-Bang Controller is proposed for shunt FACTS devices. The proposed controllers with Western System Coordinating Council (WSCC)-9 Bus system are simulated in MATLAB/SIMULINK Environment

Keywords: FACTS, SVC, STATCOM, FLC, and SIMULINK.