Abstract

For the improvement of transient stability the general methods adopted are fast acting exciters, circuit breakers and reduction in system transfer reactance. The modern trend is to employ FACTS devices in the existing system for effective utilization of existing transmission resources. These FACTS devices contribute to power flow improvement besides they extend their services in transient stability improvement as well in this paper, the work had been carried out in order to improve the Transient Stability of WSCC 9 Bus System with Fixed Compensation on Various Lines and Optimal Location has been investigated using trajectory sensitivity analysis for better results. In order to improve the Transient Stability margin further series FACTS device has been implemented. A fuzzy controlled Thyristor Controlled Series Compensation (TCSC) device has been used here and the results highlight the effectiveness of the application of a TCSC in improving the transient stability of a power system.

References

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improvement of a multi-machine power system using trajectory sensitivity"; Department of Electrical Engineering, Indian Institute of Technology, Kanpur 208 016, India.

**Index Terms**

Computer Science  
Control Systems

**Keywords**

Fuzzy Logic  
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Power System Stability