Voltage Stability Limit Enhancement using Thyristor Controlled Series Capacitor (TCSC)

Abstract

Flexible Alternating Current Transmission System (FACTS) devices can regulate the active and reactive power control as well as adaptive to voltage magnitude control simultaneously, because of their flexibility and fast control characteristics. Placement of these devices in suitable location can lead to control in line flow and maintain bus voltages in desired level and so improve voltage stability margins. This paper presents an application of Fast Voltage Stability Index (FVSI) for identifying the critical line which is considered as the best location for Thyristor Controlled Series Capacitor for voltage stability improvement. The analysis is performed on standard IEEE 30-bus test system.

References

Index Terms
| Computer Science | Electronics |

**Keywords**

TCSC  Voltage stability  Fast Voltage Stability Index (FVSI)  Reactive power