

## **On basic definition of optimal allocation of FACTS devices in power system**

### **ABSTRACT**

This paper presents the importance of FACTS elements allocation to describe the effect of FACTS devices and placement of these devices in the electric power system. Optimal allocation and control of these devices will be very important for ISO or other power market regulators. The best location, appropriate size and setting of FACTS devices are important in the deregulated electricity markets. Two types of FACTS devices are considered in this study, which are Static var compensator (SVC) and thyristor controlled series compensator (TCSC). Modeling and simulation is performed on IEEE 14 bus test system and results will be presented. The proposed research is effective and helpful in the study of voltage stability with the consideration of the FACTS elements.

**Keyword:** Deregulated electricity markets; FACTS devices; Voltage stability