Abstract

The need for the enhancement of the Transfer Capability in a deregulated power system is very essential in the power market. Available Transfer capability (ATC), and Total Transfer capability (TTC), enhancement ensures to increase the Transfer capability in a power system. Improvement of the TTC and ATC depends upon the placement of the FACTS device; sensitivity approach is used to locate the optimal location to place FACTS device. However enhancement of ATC and TTC with voltage analysis is very essential, this helps us to estimate the security of the system which is very crucial when the performance of the system is the major criteria. Repeated power flow program is used to calculate the voltage constrained ATC and TTC. Transfer capability and voltage analysis proposed in this paper are simulated in the power world simulator software.

**Index Terms**

Computer Science  
Power Systems

**Keywords**

Deregulated power system  
TTC  
ATC  
TCSC  
Total real power losses  
voltage stability

PV & V-Q curves