

A comprehensive review on methods for solving FACTS optimization problem in power systems.

ABSTRACT

This paper presents a comprehensive review of various methods for solution of flexible AC transmission systems (FACTS) optimization problem in power systems. First, it explains the requirements of an ideal solution for FACTS optimization problem, then classifies the methods used by researchers in four main groups as classical methods, technical methods, heuristics and mixed methods, and discusses thoroughly about characteristics, advantages and disadvantages of each group of methods. Finally, according to the pros and cons of these methods, heuristic methods are determined as the most effective group of optimizers and also some hints are offered for future researches on this area.

Keyword: ACTS; SVC; STATCOM; SSSC; TCSC; TCPST; TCVR; UPFC; Loadability.