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AN IMPROVISED PSO FORFUEL CURTAILMENT AND VOLTAGE MELIORATION USINGSSSC FACTS DEVICE

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ABSTRACT

With the snowball in power utilization and ongoing expansion, numerous changes are been continuously introduced to a once predicted system. Besides, electricity which is a highly engineered product is now been handled and treated as a commodity and this further made an increase in focus on quality of power ever than before. The evolving utility environment and market forces demand a more optimal and profitable operation with respect to generation, transmission and distribution .Now more than ever, adaption of new techniques like soft computing techniques for an Optimum Power flow and FACTS devices for controlling the power flow in transmission lines are being implemented, replacing the existing conventional methods. Here in this paper an IMPROVISEDPSO(IMPSO) approach incorporating a FACTS device SSSC is been implemented for operating economical and also a FACTS device for enhancement of voltage stability. Here this method is tested on an IEEE 30 bus system comparing the PSO with Improvised PSO (IMPSO) with and without FACTS device.

KEYWORDS: Optimal Power Flow, Particle Swarm Optimization, Facts device, SSSC, Voltage Stability, Economical Operation.

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