

**ECONOMIC DISPATCH IN MULTI-AREA
USING PARTICLE SWARM OPTIMIZATION
(PSO)**

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ABSTRACT

Multi-area economic dispatch (MAED) is very important issue in power system operation. This study presents a Particle Swarm Optimization (PSO) approach to address the MAED problems. This approach will consider the flow limits between the areas and generation limits in order to minimize the generation cost. The proposed method is tested with three different case studies. The results show that PSO is capable to solve ED and MAED problems. These case studies show that the PSO gives better result compared to Genetic Algorithm (GA) and Lagrange multiplier in term of minimization the total cost. The results also show that when the flow limit is increased, the generation cost will be cheaper.

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