عنوان مقاله:

Economic Load Dispatch Based PSO-TVAC Optimization with Consideration on the Impact of Renewable Energy and Subsidies

محل انتشار:

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خلاصه مقاله:

This paper presents a new approach to Economic Load Dispatch (ELD) problems with considered cost functions, impact renewable energy and Subsidies. Particle SwarmOptimazation with time-varying acceleration coefficients (PSO-TVAC) used for solving ELD Issue. The main goal in the deregulated system is subsidies and analysisperformance on goverment to minimize the total fuel cost while satisfying the load demand and operational constraints. The practical ELD problems have non-smooth cost functionswith equality and inequality constraints, which makes the problem of finding the globaloptimum difficult when using any mathematical approaches. The experimental results on the benchmark functions indicate that PSO-TVAC can provide level of performancecomparable to that given by other advanced optimization techniques. In addition to the benchmark, PSO-TVAC was also used to solve the ELD problem for power systems,which is a real-world problem and highly constrained. The results indicate that PSO-TVACcan successfully solve the ELD problem for the three-unit power system in four scenarios. Wind power is a clean energy source that can be relied on for the long-term future. A .windturbine creates reliable, cost-effective, pollution free energy

کلمات کلیدی:

Renewable Energy, Bacterial Foraging Optimization, Subsidies