

PSO BASED OPTIMAL TUNING OF LOAD FREQUENCY CONTROLLER FOR MACROGRID

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This paper deals with the Particle Swarm Optimisation (PSO) tuned Load Frequency Controller (LFC) for macrogrid, with diversified power sources. The diversified generating units considered for the purpose of LFC study are thermal, hydro, incorporated renewable energy sources and battery energy storage system. Macrogrid power system increases the reliability of the supply and instigates economic/feasible system operation. System frequency gets affected due to real power changes, this is regulated using Load Frequency Controller (LFC). The Macrogrid interconnected power system with various generating units imposes additional complexity in the tuning of controllers. Thus in this paper PSO based tuning is imposed to obtain sophisticated control parameters for LFC of Macrogrid power system.