Abstract

In this paper, Particle Swarm Optimization (PSO) based Proportional plus Integral (PI) controller has been presented for the Load Frequency Control (LFC) system of an interconnected power system. The power system comprises multi-source power generation which is more pragmatic. The controller gains have been optimized using an efficient PSO technique. The dynamic responses have been obtained by giving step load perturbation (SLP) in the control area-1. The presented LFC system assists the frequency and tie line power deviations to settle quickly with zero errors at steady state. The dynamic responses further examined by varying the SLP from 1% to 3%. The dynamic responses obtained satisfy the LFC requirements.

References

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**Index Terms**

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**Keywords**

Area Control Error  
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