عنوان مقاله:

An Optimization Method for LFC Design in Restructured Power Systems

محل انتشار:

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خلاصه مقاله:

In this paper, a bisection search method is proposed to tune the PI parameters of controllers in a restructured power system that operates under deregulation based on the bilateralpolicy scheme. The bisection method in mathematics is a rootfinding approach which repeatedly bisects an interval and thenselects a subinterval in which a root must lie for further processing. It is a very simple and rapidly converging method.To demonstrate the effectiveness of the proposed solution a 3-area restructured power system with possible contracted scenarios under large load demand and area disturbances is assumed. The results evaluation shows that the proposed control strategy achieves good performance in comparison withconventional and robust controllers. Moreover, this newly developed solution has a simple structure, does not require an accurate model of the plant and is fairly easy to implement in comparison to other controllers, which can be useful for the real world complex power systems

کلمات کلیدی:

Load-frequency control, bisection search, deregulated environment

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