

عنوان مقاله:

Load Frequency Control of Power Systems Using Robust Load Frequency Control of Power Systems Using Robust Load

محل انتشار:

دومین همایش ملی پژوهش های کاربردی در برق، مکانیک و مکترونیک (سال: 1393)

تعداد صفحات اصل مقاله: 10

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خلاصه مقاله:

In this paper, a new control method is proposed for load frequency control in multi-area thermal power system. The proposed method is based on Feedforward controller. The Feedforward controller is applied for each local area as extra control command to governor valves. Since load demands are unobserver variables in multi-area power system, load demands must be estimated in order to use Feedforward controller method. Therefore, a robust disturbance observer is used to estimate power demands in each area of power system and then estimated power demands are utilized as Feedforward controller input. In order to show the practical limitation such as rate of changes in the generating power of generation companies, Generation Rate Constrains (GRC), Governor Dead Band (GDB) and parameter variations are considered for each area. The simulation results show that the proposed controller achieves a good performance even in the presence of GRC, GDB and parameter variations

کلمات کلیدی:

Feedforward controller, Load frequency control, Multi-area power system, Power demand estimation

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