STUDENT SECTION

Load Frequency Control Simulation in the Interconnected Electrical Power Systems

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Abstract - In the article is presented the simulation of the primary control (the load frequency control) for two interconnected power systems in radial network In the paper is described the realization of the mathematical models related to the primary machine composed of the automatic speed regulator model in series with the turbine model. By simulating an imbalance between production and consumption in order to generate a stationary frequency deviation of 200mHz then it follows the dynamic evolution of he frequency according to the dimensional aspect of interconnected systems. On the other hands is interest the place where the disturbance occurs. The used model for simulating the load frequency control between the two interconnected power systems is realized by the interconnection between the primary machine model and the system represented by oscillating equation model of the rotors expressed in relative units of frequency. Depending on the structure Jacobian matrix of the interconnected power systems the model can be developed for interconnected systems in loop network. The modeling and the simulation for two interconnected power systems are realized in MATLAB-SIMULININK program in order to follow the evolution in time of the frequency, the load angle and the power flow deviation on the interconnection tie line.