

Frequency Controller Design for Distributed Generation by Load Shedding: Multi-Agent Systems Approach

Authors : M. R. Vaezi, R. Ghasemi, A. Akramizadeh

Abstract : Frequency stability of microgrids under islanded operation attracts particular attention recently. A new cooperative frequency control strategy based on centralized multi-agent system (CMAS) is proposed in this study. On this strategy, agents sent data and furthermore each component has its own to center operating decisions (MGCC). After deciding on the information, they are returned. Frequency control strategies include primary and secondary frequency control and disposal of multi-stage load in which this study will also provide a method and algorithm for load shedding. This could also be a big problem for the performance of micro-grid in times of disaster. The simulation results show the promising performance of the proposed structure of the controller based on multi agent systems.

Keywords : frequency control, islanded microgrid, multi-agent system, load shedding

Conference Title : ICPCE 2014 : International Conference on Power and Control Engineering

Conference Location : Istanbul, Türkiye

Conference Dates : November 28-29, 2014