

Sampling Effects on Secondary Voltage Control of Microgrids Based on Network of Multiagent

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Abstract : This paper studies a secondary voltage control framework of the microgrids based on the consensus for a communication network of multiagent. The proposed control is designed by the communication network with one-way links. The communication network is modeled by a directed graph. At this time, the concept of sampling is considered as the communication constraint among each distributed generator in the microgrids. To analyze the sampling effects on the secondary voltage control of the microgrids, by using Lyapunov theory and some mathematical techniques, the sufficient condition for such problem will be established regarding linear matrix inequality (LMI). Finally, some simulation results are given to illustrate the necessity of the consideration of the sampling effects on the secondary voltage control of the microgrids.

Keywords : microgrids, secondary control, multiagent, sampling, LMI

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