

Distributed generation voltage synchronization when the state changes from islanding to grid connected

Vahid Entezam ¹, Mohsen Saniei ²

1- MSc Student in Electrical Engineering, Dezful Branch, Islamic Azad University, Dezful, Iran,
2-Shahid Chamran University of Ahvaz, Ahvaz, Iran. m.saniei@scu.ac.ir

Abstract:

In this paper a control scheme for grid-connected operation mode and the island state of distributed generation is presented. In normal conditions, every inverter DG system in micro-grids to supply a Preset power, normally operate in a constant current control mode. When micro-grids removed from the network, DG inverter of each system must recognize the island and change position to voltage control mode. In this situation micro-grids supply the fixed voltage to local load. In this paper, a synchronization algorithm is provided for reconnection to the network. The results of the simulation DG, network controllers, and the islanding is provided in MATLAB Simulink.

Keywords: Distributed Generation(DG), Reconnection, Islanding, Synchronization