

Voltage and frequency stability analysis of AC microgrid

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Description

Microgrid is a single controllable unit constituting distributed generation (DG) and load in the power system. The micro source includes photovoltaic (PV) cells, wind turbine, micro turbine, fuel cell, electric accumulator and flywheel etc. Usually, the micro source operates in parallel with the normal distributed network that uses the power electronic devices. There are two typical operation modes of micro grid as the grid-connected mode and islanding mode. Thus, the running control problem is one key issue of the microgrid, which needs to be resolved in the actual operation. For exact synchronism, to protect the system and to reduce the load in case of imbalance condition, a control system is necessary to bring the system instability while providing efficient and robust electricity to the micro grid. This paper mainly analyses the micro sources with different types of loads and dispersion characteristics in different operating