

CONTROL STRATEGIES FOR MICROGRIDS EMERGENCY OPERATION

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ABSTRACT

Under normal operating conditions, a MicroGrid (MG) is interconnected with the Medium Voltage (MV) network. However, planned or unplanned events like maintenance or faults in the MV network, respectively, may lead to MG islanding. In order to deal with islanded operation and even black start following a general blackout, an emergency operation mode must be envisaged. Two possible control strategies were investigated and are described in this paper in order to operate a MG under emergency mode. A sequence of actions for a well succeeded black start procedure, involving microgeneration units, has also been identified contributing for an increase in distribution network reliability.