

Island diagnosis of distribution network in the DG inverter Using Wavelet Transform

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The use of distributed generation (DG) in the distribution system due to their extensive benefits is increasingly expanding. On the other hand, the presence of DG in distribution system creates protection issues that may occur due to the fault or an island state. The most important protection issues that may arise in the event of an error, can be blinding protection, wrong cut healthy feeders, loss of coordination of protective equipment, recloser out of sync and out of the island. The best way to overcome the problems that occur when the error occurred, and of the island, Separate quick and timely distribution of DG in various standards for doing this control mode requires listed island. The protocol for the detection of errors and the island of discrete wavelet transform to extract low-frequency components of the signal voltage transients caused by the occurrence of various events in the power grid is used. The island and for different modes of error that threatens the protection system shall be immediately detected and DG separated the distribution system. By creating educational models for different events and extraction system in terms of energy corresponding to each event and then import this energy, The fuzzy system for classifying the features found in the wavelet transform, events are classified in two categories island and Ghyrjzyrhay and timely detection of the island DG discontinued. The protection scheme is also proposed algorithm and finally by simulation, the validity of the proposed protection scheme is shown.

Keywords : Keywords: the island, distributed generation, protection, discrete wavelet transform, fuzzy systems

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