

Application of Analytical Method for Placement of DG Unit for Loss Reduction in Distribution Systems

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Abstract : The main aim of the paper is to implement a technique using distributed generation in distribution systems to reduce the distribution system losses and to improve voltage profiles. The fuzzy logic technique is used to select the proper location of DG and an analytical method is proposed to calculate the size of DG unit at any power factor. The optimal sizes of DG units are compared with optimal sizes obtained using the genetic algorithm. The suggested method is programmed under Matlab software and is tested on IEEE 33 bus system and the results are presented.

Keywords : DG Units, sizing of DG units, analytical methods, optimum size

Conference Title : ICECECE 2014 : International Conference on Electrical, Computer, Electronics and Communication Engineering

Conference Location : Paris, France

Conference Dates : May 19-20, 2014