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DISTRIBUTED GENERATION PLACEMENT AND SIZING FOR MAXIMUM SAVING IN DISTRIBUTION SYSTEM USING GRAVITATIONAL SEARCH ALGORITHM

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ABSTRACT

The Interest on Distributed Generation (DG) into Distribution system is increasing due to reasons such as increase in demand, de-regulation of utility systems and concern over environment. Finding the optimal location and size of DG are important in deciding the maximum benefit, when DG is integrated to grid. But such connection of DG must also have positive monetary return over the time. In this article real loss index and voltage index were calculated as inputs to Fuzzy inference system which will then gives the optimal DG locations as output index. In these optimal locations, a novice algorithm i.e. Gravitational Search Algorithm is used to optimized the DG sizes which maximise the objective function representing cost of maximum saving. The proposed methodology is tested on 15 bus radial system and 33 bus system and the results obtained are presented.

KEYWORDS:-Distributed Generationt; Fuzzy Approach; Distribution Systems; Gravitaional Search Algorithm

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