

## **A Novel Probabilistic Strategy for Modeling Photovoltaic Based Distributed Generators**

**Authors :** Engy A. Mohamed, Y. G. Hegazy

**Abstract :** This paper presents a novel algorithm for modeling photovoltaic based distributed generators for the purpose of optimal planning of distribution networks. The proposed algorithm utilizes sequential Monte Carlo method in order to accurately consider the stochastic nature of photovoltaic based distributed generators. The proposed algorithm is implemented in MATLAB environment and the results obtained are presented and discussed.

**Keywords :** cumulative distribution function, distributed generation, Monte Carlo

**Conference Title :** ICEM 2015 : International Conference on Energy and Management

**Conference Location :** Barcelona, Spain

**Conference Dates :** August 17-18, 2015