

## عنوان مقاله:

Resilience in distribution networks by using DG and optimal layout of feeders and transmissions for power supply in critical conditions

## محل انتشار:

سومین کنفرانس بین المللی مهندسی برق، الکترونیک و شبکه های هوشمند (سال: 1399)

تعداد صفحات اصل مقاله: 9

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## خلاصه مقاله:

In this dissertation, the resilience of distribution network has been improved using the scattered products and the establishment of new feeders. For this purpose, an appropriate index is defined, which is used as an optimization target function, and the optimal location of the new DGs and feeders and optimal values of DGs is obtained using a proposed PSO-based algorithm. The network used in this dissertation is IEEE 33 bus bar feeder, which widely is used for distribution network studies. The model used for DG is PV, and a forward-backward algorithm has been used to perform the load distribution, and the DG presence is considered in it. Simulation results shows the proper efficiency of the proposed method in increasing the resilience of the distribution network, and shows the index of voltage stability and resilience of the system are well improved. In fact, the proper presence of scattered products with power generation at near-load points and optimal locating of the feeder establishment, leads to less reactive and active power pass through the lines, and reduce the voltage drop and increase the resilience range that is the main goal of the dissertation.

## کلمات کلیدی:

resilience, PSO Algorithm, Distribution Networks, Distribution Networks losses

## لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/1041308>

