عنوان مقاله:

DISTRIBUTION FEEDER CLASSIFICATION BASED ON SELF ORGANIZED MAPS (CASE STUDY: LORESTAN
(PROVINCE, IRAN

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خلاصه مقاله:

This paper presents a clustering analysis for classifying distribution feeders based on self organized maps (SOMs) in Lorestan province, Iran. The proposed methodology classifies utility feeders into specific groups of representative feeders. The objective of this paper is to develop a new method for quickly and accurately determining the capacity of individual feeders to accept new photovoltaic (PV) projects in order to streamline the interconnection process. The data shown in this paper were provided by Lorestan Electric Power Distribution Company (LEPDC) and consists of about 200 medium-voltage feeders. A three-stage feeder classification method was proposed. The first stage is the best variable selection for cluster analyses. 7 variables were selected as the best collection of variables. The second stage is the feeder classification using SOMs. 9 clusters were selected as optimum number of clusters. The final stage is selecting a real feeder, within each cluster, that is closest to the average feeder of the cluster.

کلمات کلیدی:

component; feeder classification; distribution networks; self organized maps; Lorestan Province

لینک ثابت مقاله در پایگاه سیویلیکا:

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