عنوان مقاله:

Application of Dynamic Programming Method for Reactive Power Planning

محل انتشار:

دوازدهیمن کنفرانس مهندسی برق ایران (سال: 1383)

تعداد صفحات اصل مقاله: 6

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خلاصه مقاله:

A new approach for solving reactive power planning problem is presented, which is based on dynamic programming and the use of a sensitivity approach to obtain candidate buses for allocation of reactive power devices in power systems. Once the set of candidate buses has been defined, the program gives the location and size of the reactive sources needed to satisfy operating and security constraints. The presented method employs concepts from dynamic programming for optimization of objective function. New reactive power sources are modelled by discrete variables and investment costs are represented in detail. This method has been used to optimize objective function of reactive power planning under various loading conditions. An appropriate cycling time for reactive power planning in whole year is addressed in this paper. Results are presented for the application of the proposed methodology to Iran's South-East network, which improves voltage profile, and reduces losses.

کلمات کلیدی:

Reactive Power Planning, Dynamic Programming, Sensitivity Approach, Energy Loss

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