

## عنوان مقاله:

Transmission Expansion Planning Including Line Reactive Flow Based on DC Power Flow

## محل انتشار:

همایش ملی تولید و بهره برداری از انرژی های نو سازگار با محیط زیست (سال: 1394)

تعداد صفحات اصل مقاله: 7

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## خلاصه مقاله:

In general, transmission expansion planning (TEP) problem is large-scale, mixed-integer, nonlinear, and non convex. Most of the TEP formulations use DC power flow because of their linear feature and simplicity. Major limitation of DCPF is the error produced by neglecting the effect of reactive power flow in line loading. Since TEP solving procedure severely depends on lines thermal limit, these errors can result in producing inaccurate expansion plans. In this context, accurate determination of the capacity limit of each line is a key issue for transmission expansion problem. This paper describes a method to incorporate this effect while guarantees convergence to optimal solution and computations remains based on DCPF. The proposed method is applied to the Garver-6bus system and to the IEEE 24-bus Reliability Test System. Simulation results show the accuracy as well as the efficiency of the proposed solution technique.

## کلمات کلیدی:

DC OPF, line loading, reactive power, system planning, transmission expansion planning

## لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/410602>

