

عنوان مقاله:

A Novel Method for Fast Computation of Saddle-Node Bifurcation in Power Systems Using an Optimisation Techniq

محل انتشار:

نوزدهمین کنفرانس بین المللی برق (سال: 1383)

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نویسندگان:

Karbalaei - Department of Electrical Engineering Iran University of Science & Technology Tehran-Iran

Jadid - Department of Electrical Engineering Iran University of Science & Technology Tehran-Iran

Kalantar - Department of Electrical Engineering Iran University of Science & Technology Tehran-Iran

خلاصه مقاله:

In this paper, a new method for computation of saddle-node bifurcation is presented. In this method, initially the problem is converted to an optimisation problem, then solving the optimisation problem, saddle-node bifurcation that is the optimum point is obtained. Here instead of calculating several power flows, with very fewer iterative solution of the optimisation equations which are similar to power flow equations, the saddle-node bifurcation is obtained. The number of iterations in which the optimisation problem is solved directly depends on the number of reactive power resources reaching to their limits before saddle-node bifurcation occurs. In the proposed method, for the increase of the active power at PV buses, loss function has been considered. The simulations using a typical network highlighted .the proposed method can rapidly compute the voltage collapse point much faster than other techniques

کلمات کلیدی:

Saddle-Node Bifurcation, Optimisation

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