Dragomir Arsov
Aleksandar Dimitrovski
Electrotechnical Faculty – Skopje

SENSITIVITY MATRICES OF OPF PROBLEM OF ELECTRIC POWER SYSTEMS

ABSTRACT

This paper presents procedure for determination of sensitivity matrices of OPF problem of electric power systems in a steady state. Equations are derived of sensitivity matrices with respect to parameters of optimal values of functions, variables and Lagrange multipliers. Sensitivities of dependent variables and functions with respect to independent variables and parameters are discussed.

Keywords: OPF problem, sensitivity matrices, Karush-Kuhn-Tucker necessary conditions for optimality, Lagrange multipliers.