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**ECONOMIC DISPATCH WITH PIECEWISE LINEAR FUNCTION AND LINE
LOSS**

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ABSTRACT

This thesis presents a method to solve the economic dispatch with piecewise incremental cost function and considering the power loss in transmission lines. A generalized computer algorithm is developed which uses an iterative solution of linearized cost function to find the economic dispatch of the power system generation. The solution of the economic dispatch problem is based on Kron's loss formula using B-matrix loss coefficient. A system of three generation units are tested with developed algorithm. The results obtained show that the proposed method is able to provide the solution of economic dispatch with piecewise linear incremental function and line losses.

Keywords-economic dispatch; piecewise linear; power loss

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