ECONOMIC LOAD DISPATCH FOR PLANTS HAVING DISCONTINUOUS FUEL COST FUNCTIONS

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ABSTRACT

Economic Dispatch(ED) Solution gives the optimal combination of power output of all generating units in order to minimize total fuel cost while satisfying the load demand and operational constraints. In recent years, the study of economic load dispatch problems also include the solution for combined cycle cogeneration plant(CCCP). From this study, an efficient algorithm is used to solve the economic dispatch for CCCP. The proposed method is tested on a system of two thermal units and one CCCP unit and the results show that the generation cost of the system can be minimized.

Index term – Economic dispatch (ED), Quadratic programming (QP), Optimal power flow (OPF), Combine cycle cogeneration plant (CCCP), Combined heat and power (CHP), Simple cycle cogeneration plant (SCPP), Micro genetic algorithm (MGA), Genetic algorithm (GA), Power (P) and Voltage (V).

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