

AN ALGORITHM FOR ACTIVE POWER ECONOMIC DISPATCH

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ZULFAHMI BIN ABD MANAF
Faculty of Electrical Engineering
UNIVERSITI TEKNOLOGI MARA
40450 SHAH ALAM, SELANGOR

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ABSTRACT

Economic Dispatch is a most important discussion in nowadays power system since every electricity supplier company aims to commit the generation units required to meet the demand and to comply the systems constraints, minimizing the total generation cost. There are many factors that involved in active power economic dispatch (APED) such as transmission loss, generator efficiency and limit, and fuel cost. Therefore, there are many algorithms proposed to solve the problem of APED but the effectiveness of the algorithm for the solution would be the key if the algorithm is success or not. In this research, detailed increment transmission losses are introduced in the classical Economic Dispatch algorithm to minimize the fuel cost. The transmission losses, generator limit, and power balance constraint are included in this algorithm research. MATLAB R2010 software is being use for the research simulation. The IEEE 30 Bus system has been chose to test the proposed algorithm.

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