

以基因演算法解決多目標輸電線路設備維護問題

應鳴雄, 林世孺

資訊管理學系

資訊學院

mhying@chu.edu.tw

摘要

The Power transmission line (PTL) for its long terms persistent working, the possibility of its faults may be dramatically increased and relatively, its reliability decreased. So, the manager of PTL must face this pivotal question: how to maintain the PTL to ensure its persistent working without interruption under budget constriction. The purpose of this study wants to find a prescription which could match the demand of cost-beneficial analysis, meanwhile, save the money used in manpower for the maintenance of PTL. With four indicators: “the condition of PTL,” “the reliability of the PTL,” “interval of maintenance,” “minimize distance,” plus these concepts of ‘reliability, Hungarian method, genetic algorithm, etc. we’ ll propose a Multi-objective decision-making method used for the maintenance of PTL This study results with the findings of our desirable purpose: most urgent needs and minimize distance of Maintenance, while its reliability of persistent working could also be ensured and reduce maintenance costs.

關鍵字：Engineering Management ; Maintenance Management ; Reliability ; Genetic Algorithm.