An Optimised Generator Maintenance Policy Using Stochastic Simulation

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Abstract: For any system in continuous demand, there is ideally a long period of service interspersed with shorter periods of maintenance. At any given time, the system has a particular hazard rate or proneness to failure. In this paper, stochastic simulation has been used to develop a technique to minimise the generating system risk whilst accounting for generating cost. This has been applied to the Trinidad and Tobago Electricity Commission power system. A computer programme based on a suitable algorithm was developed in order to predict the optimum maintenance schedule.

Keywords: Maintenance, system risk, power system, stochastic simulation