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Reliability assessment of generation systems containing multiple hydro plant using simulation techniques

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Abstract-

The studies reported in this paper describe models and evaluation techniques based on Monte Carlo simulation for the reliability assessment of mixed hydro-thermal generation systems. In particular it considers the effects that system operating and water management policies have on the reliability indices. These effects are described and discussed using the basic IEEE Reliability Test System (RTS) extended by additional hydro plant data. The outcome of these studies is an improved understanding of the effects that operational policies have on the behaviour of mixed hydro-thermal systems and, in particular, an improved knowledge of the response of the RTS.

Index Terms-

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