Simulation of Line Outage Distribution Factors (L.O.D.F) Calculation for N-Buses System

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Abstract

System security involves practices designed to keep the system operating when components fail. A transmission line may be damaged by a storm leading to it being taken out by automatic relaying. If, in committing and dispatching generation, proper regard for transmission flows are maintained, the remaining transmission lines can take the increased loading with still remain within limit. Because the specific times at which initiating events that cause components to fail are unpredictable, the system must be operated at all times in such a way that the system will not be left in a dangerous condition should any credible initiating event occur. Power system equipment are designed to be operate within certain limits most pieces of equipment are protected by automatic devices that can cause equipment to be switched out of the system if these limits are violated. If any event occurs on a system that leaves it operating with limits violated, the event may be follow by a series of further actions that switch other equipment out of service. If this process of cascading failures continues, the entire system or large parts of it may completely collapse. In this paper, it has been building simulation program to study the
cases outage lines of the network system. Three cases adopted for the purposes of the study. Where study and discuss those cases in detail and its impact on network performance. It was diagnosed lines, which causes increased power flow over the limit in addition to the reflection of the other feeding lines.

References


Index Terms

Computer Science
Power Systems

Keywords
Contingency analysis; dc power flow; power system security