Abstract

This article presents an analysis of a power system under different types of contingences (power generators and high voltage transmission line outages). The work initiated by a new strategy based on location of deployment distributed generators, namely scenario A and scenario B. System losses, line loading capability and generated power has been determined, with and without the existence of the distributed generators deployment in the distribution network. A Diesel Generators with 5MVA each has been chosen to be as a distributed generators for many of economical considerations, the major is that they can be set to switch on when there's interference in power from the service organization and turn back off when power is reestablished for a safe. An arbitrary locations has been proposed as contingencies. The analysis done based on Newton Raphson and a linear programming approach as an Optimal Power Flow (OPF) applied on IEEE 30 bus test system. Matlab and Power World programs has been adopted for the simulation.
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Index Terms

Computer Science  Power Systems
Keywords

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