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Transmission and Distribution Line Fault Tracking and Assessment System

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Abstract: *Every power system has transmission and distribution lines, which should be fault free for effective and reliable operation of the system. In this paper, a novel technology which helps in detecting the faults and determining the location of faults on transmission lines and their causes is presented. The implementation of such technologies, including IoT and Big Data, is a great helping hand in increasing the grid resilience and minimizing the durations of outages. The system assists in recognizing fault conditions such as short circuits, line faults and prepares in detailing the report to enable quick fault's restoration. The conducted simulations and tests demonstrate the effective system performance in various fault conditions which can be useful in developing advanced and reliable power grids.*

Keywords: Fault detection, fault analysis, transmission lines, distribution lines, power systems, smart grids

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