Title:	**Evaluating the Reliability Worth and Risk Assessment of Electrical Medium Voltage Network: Case Study**
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Abstract:	The objective of this paper is to develop methods for risk assessment of power distribution systems. The study is concerned with Medium Voltage (MV) network where mathematical method is presented. The degree of reliability of supply is measured by the frequency, duration and magnitude of disturbances to the electrical supply. Both system indices and system worth indices are calculated and evaluated. The ultimate goal of the study is to investigate the above method and to apply it to a test network to test its feasibility. A good test network would be a single representative section of a MV network. By identifying a method that works well on MV networks, it will be possible to gain deeper understanding of MV distribution networks and classify the circuit failure and risk. Furthermore, it will allow a more comprehensive understanding of network risk and the development of alternative ways to quantify network risk which can be applied to wide range of real distribution systems. On the other hand it can be used to predict how the system is expected to behave in the future as well as to investigate the possibility and advantage that could be gained by applying new automated technology to reduce customer outage and Total Network Risk (TNR), the benefits of alternate system design and reinforcement, expansions plans and the related cost worth benefit of the alternatives. .