

Evaluating Reliability Indices in 3 Critical Feeders at Lorestan Electric Power Distribution Company

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Abstract : The main task of power distribution companies is to supply the power required by customers in an acceptable level of quality and reliability. Some key performance indicators for electric power distribution companies are those evaluating the continuity of supply within the network. More than other problems, power outages (due to lightning, flood, fire, earthquake, etc.) challenge economy and business. In addition, end users expect a reliable power supply. Reliability indices are evaluated on an annual basis by the specialized holding company of Tavanir (Power Produce, Transmission & distribution company of Iran) . Evaluation of reliability indices is essential for distribution companies, and with regard to the privatization of distribution companies, it will be of particular importance to evaluate these indices and to plan for their improvement in a not too distant future. According to IEEE-1366 standard, there are too many indices; however, the most common reliability indices include SAIFI, SAIDI and CAIDI. These indices describe the period and frequency of blackouts in the reporting period (annual or any desired timeframe). This paper calculates reliability indices for three sample feeders in Lorestan Electric Power Distribution Company and defines the threshold values in a ten-month period. At the end, strategies are introduced to reach the threshold values in order to increase customers' satisfaction.

Keywords : power, distribution network, reliability, outage

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