Using a Computer - Aided Program for Reliability Evaluation of Syrian Electrical Networks[*]

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Abstract

The research is traduces the simulation techniques used for reliability evaluation in electrical networks.
A program called Power Factory (DIgSILENT) has been used for this purpose.
A part of the distribution network 20 kV of Damascus, has been chosen in order to perform a reliability evaluation study.
The input Data needed for electrical elements are quoted from the statistical data which are available at the public company for distribution of the electrical energy in Damascus.
After performing the study, some of the reliability indices were calculated to give us, for the first time, an idea about the reliability situation of Syrian electrical distribution network. On the other hand, these results were compared to similar indices which are calculated at an European distribution network, and the difference has been shown.
Suggestion of solutions to improve the reliability level is out of scope of this study, however a comparison between the actual state and SCADA supported state is applied on the studied network.

Keywords: Electrical networks, Reliability evaluation, Reliability indices .

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