

**OPTIMAL LOAD SHEDDING USING BACTERIA FORAGING
OPTIMIZATION FOR LOSS MINIMIZATION**

This thesis is presented in partial fulfillment for the award of

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ABSTRACT

This thesis presented on optimal load shedding that had been used as the one of a tool to avoid the voltage instability. The bacterial foraging optimization (BFO) algorithm technique is employed to search the load that should be removed from the distribution network.

The objective of this research is to understand and familiarize the use of the optimal load shedding in electrical distribution and also to obtain the minimum losses for load shedding using the bacterial foraging optimization technique. In an electrical system, the distribution part is one of the main parts that will distribute the electrical energy to the consumer. If there is any disturbance, the energy cannot be distributed at its maximum load. The load shed processes will automatically detect overload situations, then shed enough load to relieve the overloaded equipment before there is loss of generation, line tripping, equipment damage, or a chaotic random shutdown of the system. The total losses must be as low as possible to avoid the problem of load shedding occurs. For this research, IEEE 30 bus system is used to compute the minimum losses of the load shedding by using bacterial foraging optimization method.

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