Optimizing Load Shedding Schedule Problem Based on Harmony Search

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Abstract : From time to time, electrical power grid is directed by the National Electricity Operator to conduct load shedding, which involves hours' power outages on the area of this study, Southern Electrical Grid of Libya (SEGL). Load shedding is conducted in order to alleviate pressure on the National Electricity Grid at times of peak demand. This approach has chosen a set of categories to study load-shedding problem considering the effect of the demand priorities on the operation of the power system during emergencies. Classification of category region for load shedding problem is solved by a new algorithm (the harmony algorithm) based on the "random generation list of category region", which is a possible solution with a proximity degree to the optimum. The obtained results prove additional enhancements compared to other heuristic approaches. The case studies are carried out on SEGL.