Abstract

This work presents proposed methods for short term power load forecasting (STPLF) for the governorate of Baghdad using two different models of Artificial Neural Networks (ANNs). The two models used in this work are the multi-layer perceptron (MLP) model trained with Levenberg-Marquardt Back Propagation (BP) algorithm and Radial Basis Function (RBF) neural network. Inputs to the ANN are the past load values and the output of the ANN is the load forecast for the weekends of certain months for Baghdad governorate. The data is divided into two parts where half of them was used for training and the other half was used for testing the ANN. Simulations were achieved by MATLAB software with the aid of Neural networks toolbox, where the data obtained for the Iraqi national grid were rearranged and preprocessed. Finally, the simulations results showed that the forecasted load values for the Baghdad governorate by the proposed methods were very close to actual ones as compared with the traditional methods.

References


Index Terms

Computer Science  
Artificial Intelligence
Keywords

Load forecasting  multilayer perceptron  radial basis neural networks (RBF)  Back Propagation.