



ELECTRICITY LOAD PREDICTION FOR WATER SUPPLY SYSTEMS

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Abstract

The efficient management of electricity consumption is an important tool to approach the basic objectives in the field of energy efficiency and environment protection. The paper describes an artificial neural network (ANN) approach to the problem of electric load profile prediction for a water supply system. The analysis was directed towards two main objectives: to determine the optimum input structure of the ANN with respect to the electric load profiles' history and to determine the best combination of weather data as input variables. Two types of weather parameters were considered (the temperature and the relative humidity) to compute a derivative parameter, namely the heat index.

Key words: artificial neural networks, energy efficiency, electricity load prediction, water supply systems
