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M. Shamaghdari

Faculty of Civil Engineering, Semnan University, Semnan, Iran.

e-mail:
ma.shamaghdari@gmail.com

M. K. Sharbatdar*

Faculty of Civil Engineering, Semnan University, Semnan, Iran.

e-mail:
msharbatdar@semnan.ac.ir

O. Rezaifar

Faculty of Civil Engineering, Semnan University, Semnan, Iran.

e-mail:
orezayfar@semnan.ac.ir

Prediction of the Amount of Energy Consumed in Existing Educational Buildings Using Artificial Neural Networks and Its Effects on Reducing Carbon Dioxide (Case Study of Mashhad Schools)

One of the major uses of energy is in residential, commercial, educational and other buildings. One of the effective ways to reduce energy consumption in these buildings is before construction. But many buildings are already under construction and a solution must be found to reduce energy consumption in these buildings. One of the important solutions is to predict the amount of energy in these buildings. In this case, the energy consumption can be evaluated before and after some changes in the building. This article addresses the issue of energy prediction in existing school buildings. For this purpose, a number of important physical characteristics of the building and its energy consumption based on consumption bills have been collected in the field. Then an artificial neural network is used for modeling. Using the results of the model, the energy of buildings in schools can be predicted. Finally, the effects of reducing carbon dioxide with respect to energy savings are discussed.

Keywords: Energy Prediction, Artificial Neural Network, School Building, Carbon Dioxide.

* Corresponding author
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