

Development of Renewable Energy Forecasting Systems using Artificial Intelligence Methodologies

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The impact of globally witnessed climate change makes it necessary to accelerate the introduction of renewable energy sources in place of fossil fuels. However there are many issues still need to be tackled for the wide introduction of renewable energies.

In addition to economic technological maturity, unpredictable nature makes it more challenging to employ renewable energy sources in practice.

Therefore we need to develop systematic management methodology for the acceleration of the employment.

The key issue of the methodology is to predict the energy generation output of the renewable energies based on the indicators detectable previously.

As an alternative this paper investigates the photovoltaic energy. Based upon the actual generation output, artificial neural network based methodology is introduced to forecast the energy generation. Discussions on the case studies in 10Kw actual case studies are made with some remarks for future research.