Abstract

The increasing demand for energy is one of the biggest reasons behind the integration of solar energy into the electric grids or networks. To ensure the efficient use of energy PV systems it becomes important to forecast information reliably. The accurate prediction of solar irradiance variation can enhance the quality of service. This integration of solar energy and accurate prediction can help in better planning and distribution of energy.

Here in this paper, a deep review of methods which are used for solar irradiance forecasting is presented. These methods help in selecting the appropriate forecast technique according to the needs or requirements. This paper also presents the metrics that are used for evaluating the performance of a forecast model.


18. A. A. Lacis and J. Hansen, “A Parameterization for the Absorption of Solar Radiation in
52. A Kazantzidis, P Tzoumanikas, A F Bais, S Fotopoulos and G. Economou., “Cloud detection and classification with the use of wholesky ground-based images”, Atmospheric
Solar Power Forecasting: A Review


68. E Lorenz, J Hurka, D Heinemann and H G Beyer., “Irradiance forecasting for the power prediction of grid connected photovoltaic systems”, IEEE J. of Selected Topics in Applied Earth


Solar Power Forecasting: A Review


104. S Cao , and J Cao., “Forecast of solar irradiance using recurrent neural networks


120. A U Haque, M H Nehrir, and P. Mandal., “Solar PV power generation forecast using a
Solar Power Forecasting: A Review


Orlando Lawrence Berkeley National Laboratory, 2010.


Index Terms

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Keywords

Solar forecasting, physical method, statistical method, hybrid method, evaluation metrics.