

Estimation of Global and Diffuse Solar Radiation Over Two Cities of Sindh, Pakistan

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Abstract : Global and Diffuse Solar radiation on horizontal surface over two cities of Sindh, namely Jacobabad and Rohri were carried out using sunshine hour data of the area to assess the feasibility of solar energy utilization in Sindh province. The result obtained shows a high variation in direct and diffuse component of solar radiation in summer and winter months (80% direct and 20% diffuse). The contribution of diffuse solar radiation is low even in monsoon months i.e. July and August. The appearance of cloud is rare even in monsoon months. The estimated value indicates that this part of Sindh has higher solar potential and solar panels can be used for power generation. The solar energy can be utilized throughout the year in this part of Sindh, Pakistan.

Keywords : solar potential over Sindh, global and diffuse solar radiation, radiation over two cities of Sindh, environmental engineering

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