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Reporting on the Southern African Reference Energy Yield Network System (SAREYNS)

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Photovoltaics (PV) has been recognized as one of the major renewable energy sources for utility-scale power generation in South Africa that can potentially meet the shortfall in generation, which Eskom currently cannot provide. However, to assure the maximum energy yield for a given PV system within a deployed climatic region, long-term reliable performance data of the various technologies need to be obtained. This paper discusses the comparison of performance data from various PV technologies operating within the Southern Africa Reference Energy Yield Network System (SAREYNS) and highlights their importance in decision making for PV system deployment. The analysis performed on the various datasets helps to determine the most suitable PV technology in their respective region in terms of actual energy yield and specific yield. Comparing these energy yield datasets within the network database, a yield forecasting platform for both emerging and current operational PV plants is available.

In addition to forecasting, the identification and tracking of progressive module degradation can be determined. Comparing these datasets, the PV technologies showed specific preferences for the various regions, and under identical solar isolation, the effect of spectral content on the technology performance was also observed.

Apply to be considered for a student award (Yes / No)?

no

Level for award (Hons, MSc, PhD, N/A)?

na

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