



Assessment of model global and direct radiation for use in solar energy resource estimation

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We present the performance and suitability of NWP models for use in solar-farm forecasting systems. This includes the quality and uncertainty at the required spatial and temporal resolutions. We present the application to both large scale solar power plants and distributed domestic-type solar energy systems. Particular attention is devoted to the assessment of the direct beam component which has started to appear as model output from the various NWP models. Emphasis is given to the ECMWF operational NWP system (with a horizontal resolution of approximately 20km). Comparisons with observations across Australia from high-quality in-situ observations and satellite data are reported.