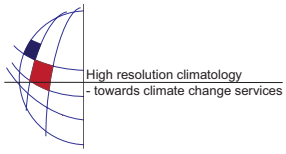
EMS Annual Meeting Abstracts
Vol. 7, EMS2010-319, 2010
10th EMS / 8th ECAC



PV production forecast in La Reunion Island

L. Dubus (1), V. Leboucher (1), and M. Garo (2)

(1) EDF R&D / MFEE, Applied Meteorology and Atmospheric Environment, CHATOU CEDEX, France (laurent.dubus@edf.fr), (2) BERTIN Services, Montigny-le-Bretonneux, FRANCE

Photovoltaic power production is developing quickly in La Reunion (Indian Ocean). In order to integrate this fluctuating energy source into the network, reliable production forecasts are necessary from real time to day+3. Weather forecasts from standard models are in general inadequate, in particular due to too coarse resolution in this complex orography area.
In this study, we use observations (Météo-France) and reanalysis (ERAinterim) fields to evaluate the potential predictability of PV production, for individual solar power plants and from the island aggregated point of view. This in particular allows to select the best weather predictors for PV production. The forecast quality of the selected fields was then established, in order to use only the interesting ones.
Finally, NWPs are used to estimate which part of PV production predictability is accessible with state of the art weather forecasting models. This leads to requirements on temporal and spatial resolution of NWP to improve the forecast quality.