

Video: Forecasting desert storms to empower solar panels

May 9 2014, by Rebecca Parsons

Solar energy is ever more becoming an important source of renewable power generation. A serious problem for the productivity of solar power plants is desert dust: it obscures the sun and makes the mirrors dirty. To prevent energy loss and improve the management of solar power plants scientists of the European research project MACC II in France are now developing a 5-day forecast to predict the movements of desert dust and thus will be able to inform power plant managers beforehand.

Solar energy is an increasingly important source of [renewable power](#) generation in Europe and the rest of the world. Most people are familiar with the solar panels on their houses or company buildings, which convert the light from the sun directly into electricity. But there is an almost invisible enemy, which can cause serious problems to big solar power plants: dust coming from Sahara desert, even if it's hundreds of kilometres away. It obscures the sun and makes the mirrors dirty, reducing the energy production.

The European MACC-II project (Monitoring Atmospheric Composition and Climate) informs power plant managers of the frequency at which a certain location is affected by these large dust plumes and by providing, in the near future, 5-day forecasts on a daily basis of the dust impact on solar radiation. For example, if a dust storm is foreseen, the complex operations to set the power plant in motion will be cancelled.

Furthermore historical data on solar irradiation in a given area is crucial to decide the location of future [solar power plants](#).

More information: www.gmes-atmosphere.eu/

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