



Solar irradiance over Earth's surface and relations with temperature rise

Marta Jimenez, Dr Marco Cony, Irene Fernández, and Dr Ralf Weisenberg
AF Aries Energía, Madrid, Spain (marta.jimenez@afconsult.com)

The present study analyzes if exist a relation between Temperature and Solar Irradiance Components during a large time period, and how it affects to Solar Energy production. The study was made in three different places over the planet since 2000 to 2013, and methodology used is based on choosing one monthly data, corresponding to highest Temperature day of each month, for to determine its respective differences.

In first approximation, a proportional relation between variables is observed both GHI component and DNI component regarding T, considering that all of them have similar trends. Keeping in mind solar energy flux definition in function of solar radiation, solar energy production haves the same trends than temperature.

This result gives cause for future studies about exact relation which connect temperature with solar radiation, which can be useful in terms of solar forecast.