

The National Renewable Energy Centre of Spain -CENER- is a technology centre specialized in applied research and development as well as in the promotion of renewable energies. CENER is divided into six departments: Wind Energy, Photovoltaic Solar Energy, Solar Thermal Energy, Biomass Energy, Bioclimatic Architecture and Renewable Energy Grid Integration.

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SOLAR RADIATION MEASUREMENT STATIONS. STATION AUDITS AND QUALITY CONTROL OF RECORDED DATA



CONSULTING FOR MEASUREMENT STATIONS

Consulting for installation and configuration of solar radiation measurement stations includes:

- Writing technical specifications
- Selecting offers
- Configuration and installation of instrumentation (power supply and communications)
- Operation and maintenance

Methodology:

The reference methodology is the "Baseline Surface Radiation Network" (BSRN), in the context of the World Meteorological Organization (WMO), which the CENER station at Sarriguren has been a member of since 2008.



QUALITY CONTROL OF RECORDED DATA

Recorded information must be exhaustively controlled for quality assurance.

Methodology:

The methodology used includes the following procedures:

- Synchronization control (checking the datalogger clock, correction of any clock drift detected)
- Monitoring solar radiation variables. Validation of data acquired
- BSRN quality control. Physically possible levels, extremely rare limits, comparison of magnitudes

IN SITU CHECKING AND VALIDATION OF STATION

Checking and validation of measurement station site as well as:

- Checking the station (configuration, installation, maintenance)
- Validation of site (horizon line, obstacle analysis)
- Validation of radiation measurements (comparison with CENER portable station, traceable to World Radiation Center (PMOD-WRC, Davos-Suiza) World Radiometric Reference (WRR))

Methodology:

The reference methodology is set by the BSRN and the recommendations of ISO TR 9901 Solar Energy – Field pyranometers – Recommended practice for use.



[Cener portable station at the Alvarado Plant of Acciona]