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Solar Testing | Solar Inspection

Solar testing and solar inspection are key services to ensure quality control and long-term success for solar power plants, especially during the construction and development phases and operation stages. These solar services aim to guarantee maximum profitability and adequate risk management to their clients.

Applus+ through Enertis, its solar and energy storage specialist, offers a **variety of solar testing and inspection services through a wide range of testing methods, PV testers, and inspection technologies while remaining independent from any solar panel or major equipment manufacturers** (structures, inverters, batteries, etc.).

THE Applus+ SOLUTION

Applus+ specialized team supports its clients by offering tailored solutions to ensure that the main components of solar projects meet the highest quality standards, combining on-site solar farm testing services with in-house laboratory testing.

The company's testing and inspection solutions include:

- **Post-shipment tests** (e.g., electroluminescence to uninstalled modules) aim to detect quality defects on solar PV panels and other components after shipment.
- **Post-installation tests** (e.g., electroluminescence to installed modules) are carried out on-site and aim to identify quality failures after the installation of the components.
- **Commissioning tests** (e.g., drone solar panel inspections, inverter efficiency measurements, I-V curve testing) are carried out to ensure that all components of solar power plants are designed, installed, and maintained correctly.
- **Warranty period inspections** that aim to verify the operational functionality of solar plant components are essential in case of compensation claims.

- **Tests in the operation stage**, such as I-V Curve, IR Inspections, Massive electroluminescence, etc.
- **Albedo measurement campaigns**, whose purpose is to increase the accuracy of the albedo values and the energy assessment.

Enertis Applus+ is an independent entity, and it offers an in-house solar testing laboratory, internationally accredited by ENAC according to UNE-EN ISO/IEC 17025:2017 standard, as well as solar mobile laboratories, also fully accredited, that enables the expansion of the scope of services that are available to clients.

As part of its commitment to RandD, the company is constantly optimizing its procedures and solar services, as well as developing new software based on data science, AI, and machine learning techniques, such as the Smart PV Inspection Tool, that enables to assess the health state of PV modules to identify defects that cause performance losses or might cause them in the future, or are a potential safety risk.

Target customers

The independent photovoltaic plant testing and inspection services of Applus+ are aimed at owners and developers of solar plants, covering the post-shipment phase of solar goods and equipment, the installation phase of these in the plant, tests, and inspections after installation; and the commissioning, operation, and maintenance (OandM) phases.

Key customer benefits

By relying on Applus+ solar testing and inspection services, our clients ensure the long-term performance of their solar farms and solar energy production optimization throughout their lifetime.

Timely identification and correction of quality defects, as well as an adequate implementation of the quality control program, are necessary for adequate risk management, avoiding loss of profit or extra cost of replacement, and allowing the owner to achieve the expected return on investment.