Your challenges
Photovoltaic (PV) power plants need to comply with strict guidelines, regulations and safety standards. After the PV power plant has been constructed, owners and operators have to ensure the operational reliability of the plant and that it fulfils the design, regulations and specifications as well as technical and safety standards before they make the final payment.

What is the Final Acceptance Test?
The Final Acceptance Test (FAT) is an evaluation carried out during the commissioning phase by an independent third party to demonstrate completion of the plant, as well as correctness and high quality of work. The FAT involves a review of design, labelling of equipment and a visual inspection of the facility. The results of the FAT are then presented in a detailed report. In the case that the FAT is conducted during plant operation, the monitoring system also verifies the functionality of the plant.

Why is the Final Acceptance Test important for your business?
The FAT provides certainty and confidence to your PV project by verifying the fulfilment and technical and safety standards, and by allowing the confirmation of project documentation conformity. A lack of FAT can result in the loss of long-term sustainable protection of revenue, and can also affect warranty compliance for future warranty claims against manufacturers.

How can you prepare for the Final Acceptance Test?
Owners and operators need to provide project design documentation (as build documentation), installation license, information about key components (solar panels and inverters), calibration lists of the installed meteorological sensors, technical manuals and maintenance manuals.
How can we help you?
TÜV SÜD’s testing and inspection services are a valuable asset in the operation of your PV installation. Both commercial and private customers regard these tests and inspections as a guarantee of safety and reliability. TÜV SÜD’s engineering experts offer proven expertise and longstanding hands-on experience.

Our services

- **Final acceptance installation inspection**
  TÜV SÜD experts inspect the plant to check for compliance with international standard IEC 62446. We check that test protocols are available for measurement, data treatment and necessary corrections according to standards.

- **Visual inspection of facilities**
  Our experts perform a visual inspection of the generator field, including the support structure, modules, mounting and cabling.

- **Labelling and markings**
  We verify that all required system and equipment labels, markings and placards are correct and in the proper locations. This includes ensuring that all equipment is properly listed, identified and labelled, suitable for the conditions of use, and installed according to the listed product instructions. All electrical equipment should be marked with the manufacturer’s identification and applicable specifications and ratings.

- **Electrical measurements**
  While not a standard part of the FAT, at the customer’s request we provide independent electrical measurement, including calculating circuit voltages and currents to verify that the PV array and system operating parameters are within specifications.

- **Detailed reporting**
  Our inspection reports list results, name, date of inspection and personnel.

Your business benefits

- **Gain confidence in plant performance** – by controlling the quality of your PV power plant during the commissioning stage to optimise energy output.

- **Minimise risk and gain certainty** – by ensuring your PV installations are in line with design specifications and meet all existing standards and regulations.

- **Strengthen your asset value** – with a partner that identifies problems from the onset, allowing you to achieve reliable and smooth-running operations.

- **Enjoy global support** – through our strong international presence and high level of knowledge in global PV markets.

Why choose TÜV SÜD?
With over 145 years of experience, TÜV SÜD offers solutions that are backed by best-practice cases and real-world scenarios. As a project implementation expert and third-party service provider with a worldwide reputation for independence, we provide clients with objective, reliable and realistic expert reports for critical decision-making. TÜV SÜD’s testing and certification services ensure that your PV plants meet rigorous national and international standards and requirements. Our Final Acceptance Test service complies with IEC 62446. We have offices located in all key markets to provide immediate and cost-effective support. Our specialists are expert partners for international investors, planners, constructors, component manufacturers and operators.

Choose certainty. Add value.
TÜV SÜD is a premium quality, safety and sustainability solutions provider that specialises in testing, inspection, auditing, certification, training and knowledge services. Represented in over 800 locations worldwide, we hold accreditations in Europe, the Americas, the Middle East, Asia and Africa. By delivering objective solutions to our customers, we add tangible value to businesses, consumers and the environment.

Related services

TÜV SÜD provides the following related services:

- Performance ratio assessment
- In-service inspection for PV power plants
- PV plant certification
- Performance Acceptance Test (PAT)