



Certified Solar Technician (CST)

Mode: Inperson (physical)

Duration: One Month from 10 to 4 PM Daily (Monday to Friday)

Suitable for: All those who want to become solar installers or solar technicians.

Eligibility: Minimum Metric

National and International certifications both are available for this

Course Outline

THEORY:

- Basic Understanding of Electrical (Volts, Ampere, Power, Active and Reactive power and power factor)
- Solar PV Components and their Integration
- Manual Calculation and Designing of Solar PV Components
- Operation and Maintenance of a Solar PV System

PRACTICAL:

- Use of Compass App for Finding South Direction.
- Use of Mobile App for checking the tilt angle for PV Modules Installation.
- Use of Digital Thermometer Gun for measuring the PV Modules Temperature
- Use of Digital Irradiance Meter for measuring Solar Radiations.
- Fixing of Double Insulated PV cables into MC4 Connectors and Fixing of Standard AC cable In Thimbles.
- Series and parallel Connection of Solar PV Module according to System Voltage and Current Ratings.
- Series and parallel Connection of Batteries for required Voltage and Ampere Hour to meet Backup.
- Complete Earthing Practice including Use Digital Earthing Meter for measuring earth Resistance.
- Use of Megger for testing the insulation resistance of Cables.
- PV cables and AC cables Routing including Use of PVC pipes, clumps, Ducts, flexible pipes and Silicon for safety of cables.
- Assembling of Mounting Structures, Calculation of shadeless Area Marking the Areas for Concrete Pads and Grouting of Mounting Structures on pads. Complete Site Survey Practice.
- Safely Installed, test and commissioned of PV ON Grid Solar System and Net Metering including installation of Net Meter, External Disconnect Switch and Net Meter Readings. And Online Configuration of Different ON Grid Inverters

including Huawei, Sungrow and Goodwe and Nitrox inverters through APP. Safely Installed, test and commissioned of Solar PV hybrid System including Setting of Hybrid Inverter including Nitrox, Epever.

- Safely Installed Test and Commissioned of Solar Off Grid (standalone) System including Charge Controller Settings.
- Hands on Practice of LV panel including Wiring of Change Over, Connecters, 4 AC Bus Bars, 4 pole AC Breaker, 4 Pole AC SPD, 2 pole PV Breaker, AC Three Phase Display.

KEY TAKEAWAYS

You will be able to,

1. Install, commission, and operate the solar PV system.
2. Troubleshooting and maintenance of solar PV system

BENEFITS OF THIS COURSE

- You will get employment in a solar company or any industry or Government as Installer and supervisor or solar technician for operation and maintenance of solar PV system.
- You can set up your own solar business of installation, operation, and maintenance of solar PV systems.

TRAINERS

1. Engr. Faiz Bhutta Master Trainer and CEO ETRC)
2. Engr. Ehtisham Ur Rehman– Lab and Research Engineer ETRC (Moderator of this course)
3. Nouman Khan – Senior Solar Technician

Contact: Program Coordinator at 03475151222 or email at info@etrc.org.pk

For admission visit at www.etrc.org.pk