

# € TRAINING

PV Solar System Design and Installation





# PV Solar System Design and Installation

## Introduction:

A PV Solar System Design & Installation training program provides hands-on instruction in designing and installing photovoltaic PV solar systems. Participants learn site assessment, system sizing, and safety integration for efficient installation. The program equips them with practical skills to mount panels, connect components, and commission PV systems effectively because it focuses on grid-direct PV systems but also covers material critical to understanding all types of PV systems.

## Program Objectives:

At the end of this program, the participants will be able to:

- Learn about the Strategic & Management Concerns.
- Understand the Technical Issues in Implementation.
- Learn about the Regulatory & Contractual Aspects.
- Understand The Work Processes.
- Learn the Professional Standards.
- Learn about Quality Assurance Methodology.

## Targeted Audience:

- Electricity engineers.
- Electricity technicians.
- Solar energy technicians.
- Construction professionals.
- Energy consultants.
- Environmental engineers.

## Program Outlines:

Unit 1:

Solar Energy: An Opportunity for Strategic Advancement:

- Solar Energy the Opportunity.
- Solar Energy & How it can help achieve your Organization' Strategic Objectives.
- Successful Implemented Project Case Studies.
- Solar Project Implementation Disasters.
- Solar Systems Technical & Technology.

## Unit 2:

### Photovoltaic Systems: From Solar Cells to System Design:

- Photovoltaic Systems.
- Technologies: Working of Solar Cells, Solar Cell Technologies, Solar Cell Losses, Solar Circuits, Solar System Engineering, Battery Storage Aspects.
- System Design Guidelines.
- System Design Methodology.

## Unit 3:

### Efficient Project Implementation and Thermal System Management:

- Project Implementation.
- Maintenance Management.
- Thermal Systems.
- Low-Temperature Systems.
- Thermal Storage Systems.

## Unit 4:

### Optimizing Concentrating Collector Systems: Design, Implementation, and Maintenance:

- Concentrating Collector System.
- System Design Guidelines.
- System Design Methodology.
- Project Implementation.



- Maintenance Management.

## Unit 5:

### Solar Project Economics and Management: Strategies for Success:

- Economic & Estimating Solar Projects.
- Regulatory Issues and Incentives.
- Good Management Practices.
- Procurement & Contract Issues.
- Recommendations for Developing your Corporate/Institutional Solar Action Plan.