Global Horizon
TRAINING CENTER

Training Course:
Solar Photovoltaic (PV) Systems: EPC Phase Excellence in Design, Installation, and Compliance

21 - 25 September 2025

Istanbul (Turkey)

DoubleTree by Hilton Istanbul Esentepe

Training Course:
Solar Photovoltaic (PV) Systems: EPC Phase Excellence in Design, Installation, and Compliance

Training Course code: EN236141 From: 21 - 25 September 2025 Venue: Istanbul (Turkey) - DoubleTree by Hilton Istanbul Esentepe Training Course Fees: 6500 Euro

Introduction:

With the global push toward renewable energy, solar photovoltaic PV systems have become a cornerstone of sustainable power generation. The success of any solar project hinges on the effectiveness of its EPC Engineering, Procurement, and Construction phase. This specialized training program, designed by Global Horizon Training Center, equips participants with the technical knowledge and practical tools required to ensure high-quality, efficient, and compliant execution of solar PV projects. It covers critical aspects such as system design and sizing, hybrid configurations, safety standards, performance modeling, and quality control ensuring participants are well-prepared to support utility-scale and commercial PV installations.

Objectives:

By the end of the course, participants will be able to:

- Design and size PV systems based on energy requirements and site conditions
- Interpret and develop single-line diagrams SLDs for PV installations
- Apply international and local codes and standards for solar PV systems
- Understand hybrid system architectures and configurations
- Implement best practices for installation, commissioning, and quality control
- Conduct performance modeling and estimate energy yields using simulation tools
- Ensure safety and regulatory compliance throughout project execution

Course Methodology:

- Interactive technical lectures with visual and engineering schematics
- Hands-on exercises using simulation and design tools e.g., PVsyst, Helioscope
- Group case studies on real-world EPC projects
- SLD drawing sessions and troubleshooting scenarios

- Guided discussions on current standards, challenges, and innovations

Organizational Impact:

Organizations will benefit from:

- Enhanced internal EPC team competencies and reduced external dependency
- Improved project timelines and cost control through optimized design and implementation
- Fewer site errors and delays due to rigorous adherence to quality and compliance
- Greater stakeholder trust via documented safety procedures and testing outcomes
- Increased return on investment from improved system efficiency and performance prediction

Target Audience:

- Solar project engineers and EPC contractors
- Electrical and renewable energy engineers
- Site managers and field supervisors involved in solar installations
- Procurement officers and quality assurance professionals
- Technical consultants and safety officers in renewable energy projects

Outlines:

Day 1: System Design, Sizing, and Configuration Essentials

- Fundamentals of solar radiation and PV module selection
- Load assessment and demand profile analysis
- Design considerations for grid-tied and hybrid systems
- PV system sizing calculations and design tools overview

- Overview of hybrid systems: PV-Diesel, PV-Battery, and grid-interactive models

Day 2: Engineering Design & Compliance Standards

- Reading and developing single-line diagrams SLDs
- String configurations, inverter matching, and component coordination
- Cabling, grounding, and surge protection design
- Overview of applicable codes and standards IEC, NEC, ISO, local regulations
- System protection schemes and interface with utility

Day 3: Installation, Safety, and Best Practices

- Mounting structures and racking systems: types and installation
- Installation checklists, tools, and field coordination
- Safety standards OSHA, IEC 62446, NEC 690 and PPE
- Site safety plans and hazard mitigation procedures
- Testing and inspection prior to commissioning

Day 4: Performance Modeling and Energy Yield Estimation

- Introduction to PVsyst, Helioscope, and other modeling tools
- Setting up project parameters and loss estimation
- Meteorological data sources and their accuracy
- Generating performance ratio PR and energy yield simulations
- Interpreting simulation results for project feasibility

Day 5: Quality Control, Testing, and Commissioning

- Quality assurance frameworks for EPC solar projects

- Pre-commissioning and post-installation testing procedures
- IR thermography, IV curve testing, and insulation resistance checks
- Documentation and reporting for client handover
- Final review and applied case study presentation by participants.

Registration form on the Training Course: Solar Photovoltaic (PV) Systems: EPC Phase Excellence in Design, Installation, and Compliance

Training Course code: EN236141 From: 21 - 25 September 2025 Venue: Istanbul (Turkey) - DoubleTree by Hilton Istanbul Esentepe Training Course Fees: 6500 Euro

Complete & Mail or fax to Global Horizon Training Center (GHTC) at the address given below

Delegate Information

Full Name (Mr / Ms / Dr / Eng): .....
Position: .....
Telephone / Mobile: .....
Personal E-Mail: .....
Official E-Mail: .....

Company Information

Company Name: .....
Address: .....
City / Country: .....

Person Responsible for Training and Development

Full Name (Mr / Ms / Dr / Eng): .....
Position: .....
Telephone / Mobile: .....
Personal E-Mail: .....
Official E-Mail: .....

Payment Method

☐ Please find enclosed a cheque made payable to Global Horizon

☐ Please invoice me

☐ Please invoice my company

Easy Ways To Register

Telephone: +201095004484 to provisionally reserve your place.	Fax your completed registration form to: +20233379764	E-mail to us : info@gh4t.com or training@gh4t.com	Complete & return the booking form with cheque to:Global Horizon 3 Oudai street, Aldouki, Giza, Giza Governorate, Egypt.