Tel No:+97126654546 | Fax No:+97126654182 | Email: training@cmc-me.com | www.cmc-me.com

RE052:
Solar PV Expert

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Training Description:

This intensive training course equips you with the theoretical and practical expertise to become a solar photovoltaic (PV) systems expert. Dive deep into the science, technology, design, installation and maintenance of solar PV systems, preparing you for a rewarding career in the rapidly growing clean energy sector.

Training Objectives:

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

- ✓ Master the fundamentals of solar photovoltaic technology
- ✓ Become proficient in solar PV system design
- ✓ Develop practical installation and maintenance skills
- ✓ Navigate the financial and regulatory landscape
- ✓ Analyze the cost-effectiveness and environmental impact of solar PV systems
- ✓ Stay ahead of the curve

Training Designed for:

This course is intended for Aspiring solar PV professionals seeking industry-relevant knowledge and practical skills. Engineers, architects, builders, and contractors looking to expand their skillset to include solar energy solutions. Individuals passionate about clean energy and sustainability, eager to contribute to a greener future.

Training Requirement:

"Hand's on practical sessions, equipment and software will be applied during the course if required and as per the client's request."

Contents can be adapted to your specific wishes. It is therefore possible to focus on specific modules of the training course as per client's learning needs and objectives. Further, it should be forwarded to us a month prior to the course dates.

Training Program:

FIVE DAYS:

- ❖ Introduction
- ❖ Module 1: Introduction to Solar PV Technology:
  - Solar energy basics: Understanding sunlight, radiation, and photovoltaic conversion.
  - PV cell types and technologies: Exploring silicon, thin-film, and high-efficiency materials.
  - System components: Inverters, charge controllers, batteries, racking systems, and monitoring tools.
  - System operation principles: DC/AC conversion, maximum power point tracking, and grid interconnection.
- ❖ Module 2: Solar PV System Design:
  - Site assessment and energy demand analysis: Determining solar potential, energy consumption patterns, and system sizing.

- System design software and tools: Using industry-standard software for modeling, shading analysis, and component selection.
- Electrical design and wiring considerations: Understanding DC and AC circuits, sizing conductors, and ensuring safety.
- Grid interconnection requirements: Net metering policies, interconnection agreements, and permitting processes.

❖ Module 3: Solar PV System Installation and Maintenance:
- Safety protocols and regulations: Understanding electrical hazards, personal protective equipment, and emergency procedures.
- Installation techniques: Roof mounting, ground mounting, system assembly, and electrical connections.
- Commissioning and troubleshooting: Verifying system functionality, identifying and resolving performance issues.
- System maintenance and performance monitoring: Routine inspections, cleaning procedures, and data analysis for optimizing output.

❖ Module 4: Financial and Regulatory Aspects:
- Solar energy incentives and financing options: Exploring tax credits, rebates, and loan programs for residential and commercial projects.
- Regulatory landscape: Understanding local building codes, permitting requirements, and grid interconnection policies.
- Project cost analysis and economic feasibility: Evaluating return on investment, payback periods, and cost-benefit considerations.

❖ Module 5: Environmental Impact and Sustainability:
- Life cycle analysis of solar PV systems: Assessing environmental benefits, greenhouse gas reduction, and resource conservation.
- Integration with green building practices and smart grids: Exploring synergies with energy efficiency strategies and renewable energy systems.
- The future of solar energy: Emerging technologies, storage solutions, and grid modernization efforts.

❖ Course Conclusion
❖ POST-TEST and EVALUATION

Training Methodology:

This interactive training course includes the following training methodologies as a percentage of the total tuition hours:

- 30% Lectures, Concepts, Role Play
- 70% Workshops & Work Presentations, Techniques, Based on Case Studies & Practical Exercises, Gamification, Software & General Discussions
- Pre and Post Test

Training Certificate(s):

CMCT Internationally recognized certificate(s) will be issued to each participant who completed the course.

Training Fees:

TBA as per the course location - This rate includes participant's manual, hand-outs, buffet lunch, coffee/tea on arrival, morning & afternoon of each day.

Note: The 5% VAT (Value Added Tax), will be effective starting 01st of January 2018 as per the new regulation from the UAE Government. The VAT applies for all quotation both for local and abroad.

Training Timings:

Daily Timings:

07:45 - 08:00	Morning Coffee / Tea
08:00 - 10:00	First Session
10:00 - 10:20	Recess (Coffee/Tea/Snacks)
10:20 - 12:20	Second Session
12:20 - 13:00	Recess (Prayer Break & Lunch)
13:00 - 14:00	Last Session

For training registrations or in-house enquiries, please contact:

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