

# Solar PV System Design Training

Dubai and Abu Dhabi, United Arab Emirates

## Overview

Global Energy and Environmental Engineering Services Ltd. (GE3S) and its sister company Emergent Ventures International (EVI) have been working for more than a decade in the field of renewable energy and sustainability. Our mission is to provide industry-leading technical training and expertise in renewable energy to empower people, communities, and businesses worldwide.

## Course Objective

Take a deep dive into best practices pertaining to designing grid connected and off grid PV systems. The focus is on residential and commercial-scale systems, but the Code requirements, design parameters, and best practices are applicable to all types and sizes of PV installations. Detailed lessons address requirements for disconnects, over current protection, and wire sizing; interconnection requirements and calculations; grounding, ground-faults, and surge protection; calculations for system sizing, inverter selection, and electrical configuration; ground and roof mount details; and commissioning and performance analysis procedures.

## Who should attend?

This course is designed for individuals with experience in the electrical occupations but otherwise have little or no experience with PV systems or equipment. Ideal participants include:

- Qualified electricians
- Electrical/ Solar contractors
- Renewable Energy Consultants
- Government Entities

- Students

## Course Outline

The Course is of two days:

### Day One:

- Sun Geometry
- PV System Component – Overview
  - o PV Modules
  - o Inverters & BoS
  - o Mounting Structures
- Solar PV System – Concept & Types
- PV System Design – Grid Connected / Net Metering / Gross Metering

### Day Two:

- PV System Design – Continued
- Overview of Simulation Software – PVSyst

## Material

Course presentation notes.

## Certificate

Participants who attend and complete the course obtain a certificate of accomplishment from GE3S signed by the Managing Director of the company.

## Course Director



### Kapil Kumar Nirmal

Executive Programme in Management for Young Professional from Indian Institute of Management, Kolkata (IIMC) B.Tech. (Electrical and

Electronics) from UP Technical University (UPTU). Kapil Kumar Nirmal is certified PV Syst Switzerland and Certified National Master Trainer, India. Kapil Kumar Nirmal has over 10 years of work experience in field of Solar Energy. Kapil possesses vast knowledge in design and engineering, consulting services. Have provided consulting in various countries India, Germany, UAE, Bangladesh, Nepal, and Malaysia. During his tenure, Kapil has worked on variety of projects, like

- o Solar-Wind Hybrid
  - o Solar-Diesel-Storage Hybrid (Island Electrification)
  - o Roof Top Solar PV (10kW to large scale industrial shed >5MW)
  - o Large ground mounted projects (1MW to 250MW)
- In terms of capacity, Kapil has delivered more than 2GW of design & engineering, consulting assignments.

### Rishabh Kasliwal

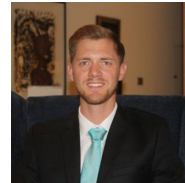


M.S. in Mechanical Engineering from Stanford USA, LEED AP, IGBC Reviewer, USGBC LEED Reviewer, ASHRAE Member, BEE Energy Auditor. Rishabh

Kasliwal has 12 years of experience in the field of sustainable development, green buildings and Solar System Designing. He has rich experience of conducting courses on LEED and other green building guidelines

Kasliwal is currently the Head of Building Commissioning in Global Energy and Environmental Engineering Services Ltd. (GE3S). He is a registered Professional Engineer in California and a certified

Energy Auditor by the Bureau of Energy Efficiency, India. He is a LEED AP and part of the GBCI team to review projects applying for LEED Certification under USGBC. He is a certified evaluator and trainer for GRIHA. He has works on several Green Building projects around UAE, USA, Saudi Arabia, Kuwait, India and South East Asian Countries.



### David Pearce

M.S. in Renewable Energy Engineering from Heriot -Watt University, LEED GA:

David has 5 years of experience in green buildings and solar energy. He has delivered training courses on LEED and Estidama for many corporates as well as aspiring professionals. He has worked on more than 10 green building projects in the Middle East region.

He has worked in the U.S., Spain and Antarctica prior to moving to Dubai.

## Date & Venue

This course will be held in the Incubator Building of Masdar City, Abu Dhabi. Free Parking and free wireless Internet Access is available.

- 1<sup>st</sup> Day: 27<sup>th</sup> Oct. 2017
- 2<sup>nd</sup> Day: 28<sup>th</sup> October 2017

Timings:

- 9:00 am – 12:00 pm & 1:30 pm – 4:30 pm

## Course Fee

The course fee includes course attendance, course material, coffee breaks and snacks and certificate of accomplishment.

- General Fee: AED 3,600/-
- For early registration: (until 15/8/2017): AED 3,200/-
- For College Students: AED 2,500/-

## Course Registration Form Solar PV System Design – Registration Form

<b>Schedule:</b>	<b>Timings:</b>
1 <sup>st</sup> Day: 27 <sup>th</sup> October 2017 (Friday)	9:00 am – 12:00 pm      1:30 pm – 4:30 pm
2 <sup>nd</sup> Day: 28 <sup>th</sup> October 2017 (Saturday)	9:00 am – 12:00 pm      1:30 pm – 4:30 pm

### PERSONAL DETAILS

Title:			
Full Name:			
Tel. No.:		Mobile No.:	
E-mail ID:			

### COMPANY DETAILS

Organization Name:			
Position:		Department:	
E-mail ID:			
Tel. No.:		Fax No.:	
Address:			
Emirate:		P.O. Box	

### EXAM PREPARATION FEE

<input type="checkbox"/> General Fee:	<input type="checkbox"/> Early Registration: <small>(until 15 Sept. 2017)</small>	<input type="checkbox"/> For College Students:
AED3,600.00	AED 3,200.00 <i>(One month before the course)</i>	AED 2,500.00
Please make all cheque payable/ transfer to: "Global Energy and Environmental Engineering Services Limited" Bank Account No.: 019120006469		IBAN Account No.: AE800330000019120006469 Bank: Mashreq Bank, Abu Dhabi, UAE Swift code: BOMLAEAD

*The course fee includes course attendance, course material, coffee breaks and snacks and certificate of accomplishment.*

### Other Information:

Attendee must bring a laptop for use throughout the duration of the course.

Acknowledged

### Confirmation:

Full Name	Signature
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Date: