PHOTOVOLTAIC SOLAR SYSTEMS

SAIEE-0817-V : 2 CPD credits : Category 1
SAIEE House,
18a Gill Street, Observatory
Johannesburg

OVERVIEW

A two day interactive course which will provide the knowledge on how to inspect a site for the installation of a Photovoltaic Solar System, provide the basic knowledge for installation, do necessary calculations for the correct applications, analyse different configurations and operating characteristics, provide the rules and regulations with regard to compliance of statutory requirements, safety procedures and codes of practice.

COURSE OUTLINE

Theoretical Part (1 ½ days)

- Introduction
- Standards and Regulations
- Solar resources
- Basics of System Design
- Basic wirings, effect of temperatures
- Size, type and rating of cables
- Connectors, fuses, circuit breakers, diodes
- Modules and battery connectivity
- Calculation of power usage
- Calculation of appliances power usage
- Lights and definition of Lumens/Watts conversion
- Halogen, fluorescent lighting, DC and AC lights
- Batteries: types, capacity and calculation
- Amphours and metering
- Safety : Doing works with batteries
- Charge controller and regulator
- Different specs from manufacturing
- Stand alone system inverters
- Ampacity of inverters
- Installation of inverters
- Ampere rating / air / short circuit
- Overcurrent protection, PV array and equipment disconnect
- Fuse protection, values / fusing of PV
- Panel boards, boxes and enclosures
- System labels and warnings
- Fire protection smoke detectors
- PV system maintenance procedures & insurance
- Final check out, inspections and commissioning
- System design, documentation
- Testing of understanding / practical exercise

THE SOUTH AFRICAN INSTITUTE OF ELECTRICAL ENGINEERS

PRACTICAL (1/2 DAY)

- Usage of electrical instruments
- Connection of panels and batteries in series and parallel
- System design, documentation
- Workshop & design calculation

TARGET AUDIENCE

- Engineers from any discipline interested in energy efficiency
- Architects
- Town planners

COST : R5,700 - includes teas, lunches and course material
R4,500 discounted fee for active SAIEE Members

COURSE DATE :

6-7 July 2015 : SAIEE House, JHB

Registration : 08:00 – 08:30
Workshop : 08:00 - 17:00

PRESENTER

ATTILIO DALVIT MSc Information Technology Management (UK); MAP5 and Marketing Management – Wits School of Business; Mech Eng (Secuola Tecnica Industriale Galileo Italy)

Attilio has many years experience in design, installation and development of computer networks for major corporations including Computer Science (SA), Anglo American; Russell Holdings (JD Group), ISSKOR (Sishen), Drake Computer, AID Systems, Agency for Advertising & marketing, PM for Europ Assistance etc. He was Guest lecturer to the Catholic University in Milano (Italy) for MBA post-graduate students on Information Technology and Voice over IP; and Academic Supervisor for several MSc students in Information Technology at the Da Vinci Institute for Technology Management Innovation. Among his key achievements are : Installation of the 1st 'Light Link' infrared transmitter and received 2,5 Mb/s distance of 3 kms, recipient of the Engineer of the Year Award during his employment at Computer Sciences Corporation. Since April 2013 he has been Site Manager for Green EcoBuilding SA of the partial installation of 30MW of the 94MW Solar Capital Project in De Aar.

REGISTRATION : CONTACT DETAILS

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