



WORKSHOP ON SOLAR ENERGY

ONE DAY WORKSHOP: 10.00 AM – 6.00 PM: 4 SESSIONS

1. SESSION-I: 10.00 AM – 11.45 AM; 11.45 AM-12.00 NOON – TEA BREAK
2. SESSION-2: 12.00 N – 1.30 PM; 1.30 PM-2.00 PM – LUNCH BREAK
3. SESSION-3: 2.00 PM – 3.45 PM; 3.45 PM – 4.00 PM – TEA BREAK
4. SESSION-4: 4.00 PM – 6.00 PM

PROGRAM COORDINATOR AND CONDUCTOR – SANAT KUMAR MISHRA & HIS TEAM

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MEDIUM: POWER POINT PRESENTATIONS; MS EXCEL SHEETS, SHORT VIDEOS; PARTICIPATIVE

AIDS: PA SYSTEM, OVERHEAD PROJECTOR, SCREEN, SOFT BOARD WITH PEN, LASER GUN

CLASS STRENGTH – 200-300

DELIVERABLES:

This training program is designed for professionals who are looking at demystifying the business, finance, technology & regulatory landscape of solar energy. In this program, information necessary to enter the business of Solar Energy will be provided along with excellent networking opportunities. A candidate will be able to have an understanding of the **Installation & Design of a Solar system, Technology & Components, Site analysis, Load calculations, How to enter the business of solar, National Solar Mission, Government & State policies, Fundamentals of Solar Photovoltaic's**. The course will be conducted in a workshop mode (participative) and each session builds upon the previous session. We also conduct one to one session with each participant at the end of the training. The Day long Works shop will make the audience well-conversant with broad outline on Renewable Energy Sources, specifically Solar Energy, with graphic details on application and future of Solar Energy both global and Indian prospective. Students undergoing this course should be able to comprehend and appreciate the application, adoption and adaption of Solar Energy in various applications. An effort has also been made to expose the vast window of opportunities available to the budding engineers to either become an entrepreneur or get a job in an exponentially expanding Solar Energy business.



Program Details:

SESSION-I: 10.00 AM – 11.45 AM

1. Solar Energy overview
2. Solar Irradiation, Insolation, Sun path & Solar graph , Solar Energy and Surface Meteorology
3. India's potential of Solar Energy harness, Projected Road map and Government Policies
4. Solar Power Applications
5. Harnessing of Solar Energy By (a) Generating Electricity from Solar PV panels: (b) Solar Thermal Energy

TEA BREAK: 11.45 AM – 12.00 NOON

SESSION-II: 12.00 NOON-1.30 PM

Various Types of Solar PV Panels, Design Structure, Advantages & Disadvantages

- a. PV and Solar Panels Types with Pros and Cons
- b. Different Types of Solar Panels
- c. Crystalline Silicon (c-Si) for PV Technology
- d. Polycrystalline solar panels
- e. String Ribbon Solar Cells
- f. Thin Film Solar Cells (TFSC) or (TFPV)
- g. Amorphous silicon (a-Si or a-Si:H) Solar Cells and PV Modules
- h. Cadmium Telluride (CdTe) Solar Cells
- i. Copper Indium Gallium Selenide (CIGS/ CIS) Solar Cells
- j. BIPV: Building Integrated Photovoltaic Panels
- k. Solar Thermal Panels
- l. Hybrid Solar Cells and PV Panels
- m. Which is the best type of Solar Panel for Home Use?
- n. Space required to install PV panels

LUNCH BREAK: 1.30 PM – 2.00 PM



SESSION-III: 2.00 PM-3.45PM

INSTALLATION OF PV PANELS

- a. Selection and Preparation of Site
- b. Calculation of Load
- c. Designing the System
 - ✓ Tailor making
 - ✓ Reorganizing the load
 - ✓ Structural design
 - ✓ Mounting design
 - ✓ Electrical Drawing
 - ✓ Instrumentation design
 - ✓ To calculate the no of solar panel (with rating)
 - ✓ To calculate the rating of Solar panel
 - ✓ To calculate the rating of batteries for Solar panel system
 - ✓ To calculate the backup time of batteries
 - ✓ To calculate the charging current for batteries
 - ✓ To Calculate Charging time for batteries
 - ✓ UPS Rating for load requirement and much more...
- d. Installation Procedures
- e. Commissioning & Testing
- f. Net Metering, Feed in Meter & Gross Meter
- g. Documentation

TEA BREAK: 3.45 PM – 4.00 PM

SESSION-IV: 4.00 PM-6.00 PM

a. Enterprise & Job Opportunities in Solar Energy Sector

1. PROJECT DEVELOPERS
2. PROJECT COORDINATORS
3. DESIGN ENGINEER
4. CIVIL & STRUCTURAL ENGINEER
5. EPC CONTRACTORS
6. BIPV ARCHITECTS
7. ELECTRICAL AND ELECTRONICS (INSTRUMENTATION) COMMISSIONING
8. DOCUMENTATION COMPILERS
9. OPERATION & MAINTENANCE ENGINEERS
10. PRODUCTION SUPERVISORS & MANAGERS IN SPV MANUFACTURING SHOP FLOOR
11. DEALERS & DISTRIBUTORS OF SOLAR PV PANELS AND OTHER SOLAR ENERGY PRODUCTS
12. NGO IN SETTING UP OF STANDALONE SOLAR ENERGY GENERATION FOR VILLAGES & SLUMS

b. QUESTION AND ANSWER & WRAP UP SESSION

c. DISTRIBUTION OF CERTIFICATES OF PARTICIPATION