

**CERTIFIED FIVE DAY ADVANCE TRAINING ON  
SOLAR PHOTO VOLTAIC TECHNOLOGY**

**Date: 19<sup>th</sup> to 23<sup>rd</sup> August 2013**



**Organized by**

**Center for Sustainable Development**

**In association with  
UVCE, Bangalore under TEQIP, II  
A World Bank assisted Program**

**With the support from  
Ministry of New and Renewable Energy (MNRE)**

**Venue:  
University Visvesvaraya College of Engineering (UVCE)  
K. R. Circle, Dr. Ambedkar Veedhi,  
Bangalore 560001. Ph: 080-22961803**

The rapidly developing solar/PV industry in India, motivated by the Jawaharlal Nehru National Solar Mission (JNNSM) as well as State government policies, is already experiencing a severe shortage of adequately trained and skilled technical manpower in achieving its early goals. Further phases of the JNNSM and the roll out of State government solar policies across the country will accentuate the need for trained technical personnel across all expertise segments from design, engineering and manufacturing to installation, operation and maintenance of solar PV systems. Creation of skilled and semi-skilled man power for installation and maintenance of the solar systems can be done through providing training on solar technologies. This program aims at providing the advance training on solar PV to technicians and engineers.

### **Course content**

The 5 Days training programme will be an intense course comprising of a mix of classroom lessons, demonstrations/practical session and site visit. The training programme will cover the following topics:

- Electrical basics
- Introduction to grid-connect PV systems
- Review of solar radiation(tilting modules)
- Review of PV cells and modules
- Review PV mounting systems
- Balance of the system equipments
- Site assessments
- Cable sizing
- Matching array to the inverter
- System installation
- System maintenance and troubleshooting

### **Benefits of the advance training**

Here is an opportunity for individuals interested in solar energy, to enhance your career prospects and get placed in a solar company, an opportunity for electrical / mechanical / civil engineers , entrepreneurs and would be entrepreneurs wanting to enter the solar markets, an opportunity for B.E /Diploma engineering students to learn and upgrade their skills on solar PV. An opportunity of the 5 days Advance training on Solar PV' is brought to you by Ministry of New Renewable Energy and is organized by

Center of Sustainable Development with the technical support from GSES Delhi.

- Become conversant with site assessments, PV systems, types and specifications of inverters, system protection, cable sizing, system yield and losses, system installation, commissioning, maintenance and troubleshooting.
- An opportunity to interact with solar PV experts.
- Become a certified solar PV installer.

### Target Participants:

- Should have a diploma/B.E/ITI in electrical/mechanical/civil OR working experience of 1 year in solar power sector.
- Engineer/technicians currently working in solar industry.
- Students in the final year of B.E/Diploma in electrical/mechanical/civil engineering.
- Research scholar doing research on solar PV or related issues.
- Faculty and technical staff of engineering colleges belonging to mechanical, electrical and electronics branch.

### Course fee:

- Rs. 2500/- per participant (other than students & research scholars & Non TEQIP institutions)
- Rs. 1000/- for students and research scholar\*  
Fee Inclusive of: course material, site visits, course completion certificate, Lunch & coffee/tea.  
(\* proof required)
- Free for participants from TEQIP institutions

### Faculty:

- **Introduction lecture by Dr. Gururaja**, Former Senior Adviser, Energy and Transport Branch, Department of Economic and Social Affairs, United Nations. Board Member of Center for Sustainable Development.
- **Key Faculty: Mr. Dwipen Bourah**- cofounder and managing director, G.S.E.S India more than 20 years of experience in Renewable Energy Engineering design, Planning, Research, Project Management and Training

No. Seats available: **Maximum number of participants: 40**

### **Center for Sustainable Development (CSD)**

CSD is a Bangalore based nongovernmental organization registered in 2003 under the Karnataka Societies Registration Act. CSD's mission is to provide solutions to the challenges faced by the government and private organizations and communities in promoting sustainable development. CSD's core competence has been in training and capacity building. So far CSD has conducted more than 200 trainings to reputed clients like BESCO, KUWSB, BMT, IBM, MNRE, KREDL and many more.

The other activities of CSD relates to the following areas

- Resource efficiency management – Energy, waste and water
- Climate change and cleaner production
- Environmental management and environmental governance
- Sustainable urban development

For more details please visit our website: [www.csdindia.in](http://www.csdindia.in)

### **How to apply:**

**Registration form is made available on [www.csdindia.in](http://www.csdindia.in) and is to be dully filled and submitted on/before 14<sup>st</sup> August 2013. Registration form to be sent by email or post. Email: [csdbng@yahoo.co.in](mailto:csdbng@yahoo.co.in)**

OR

**The enclosed registration form can be posted to given address of communication.**

For any clarification contact: Mrs. C.A. Pushpa, CEO - HRD  
Mobile: 9449030732/ 080 65603839