



GERMI

Gujarat Energy
Research and
Management Institute

13th

SOLAR POWER PROFESSIONAL WORKSHOP

A comprehensive workshop on

SOLAR PHOTOVOLTAIC DESIGN, TECHNOLOGY AND APPLICATION

focusing on capacity-building of professionals
entering or established in the solar power sector

Date: 22nd-27th May, 2017

Venue: GERMI, PDU Campus, Gandhinagar, Gujarat

GERMI is recognized as a Centre of Excellence by
SCGJ - an initiative of MSDE & MNRE,
Govt. of India



GERMI, an ISO 9001 : 2008 certified institute, is a centre for excellence in industry learning, research and development and education. It is set up to develop human resource assets to cater to the renewable and non-renewable energy sector, improve knowledge base of policy-makers and technologists, and provide a competitive edge to leaders to compete in global arena.

GERMI is a recognized Scientific and Industrial Research Organization (SIRO) by the Department of Department of Scientific and Industrial Research, Government of India, Schedule-I Environment Auditor recognized by the Gujarat Pollution Control Board, an Energy Auditor Consultant recognized by the Gujarat Energy Development Agency (GEDA) and recognized as a Centre of Excellence to foster development of skilled manpower in all sectors covered by Skill Council for Green Jobs.

KEY TAKEAWAYS

- In-depth knowledge of basics, various components of a photovoltaic power plant such as photovoltaic modules, inverters, charge controllers, batteries, switch-yard, SCADA, structures etc.
- **System Design:** Photovoltaic system types, design philosophy, principles, examples and calculations
- **Hands-On:** Site survey tools, weather measurements, photovoltaic system installation
- **Software Simulation:** Comprehensive learning of an industry-standard software like PVSyst
- **Techno-Commercial:** Project management, economics and finance of projects, solar policies
- **Site Visit:** i) Visit to PV module manufacturing unit witnessing of module testing and and ii) Visit and study of a MW-scale PV Power Plant

WHO SHOULD ATTEND?

- **Administrators, Managers** and **Decision-makers** in the Private & Public sectors; Governments
- **Engineers** in designs & projects
- **Entrepreneurs** exploring the field and value chain of solar energy
- **Professionals** from stakeholder industries such as Banking, Finance, Architecture, Legal, etc.

SCGJ Skill Council for Green Jobs

MSDE Ministry of Skill Development and Entrepreneurship

MNRE Ministry of New and Renewable Energy

PREVIOUS WORKSHOP CLIENTS:

- NTPC
- Karnataka Renewable Energy Development Ltd.
- Electrotherm India
- Essar Steel
- GMR Group
- Gujarat Industries Power Corporation Ltd.
- Harsha Abacus Solar
- HCL Infosystems
- Kalpataru Projects
- Sunedision Energy India.
- Rural Electrification Corporation Ltd.
- Ministry of New and Renewable Energy
- Polycab Wires Pvt. Ltd
- Godrej & Boyce Mfg. Co. Ltd.
- Schlumberger Ltd.
- Cairn Energy
- Gamesa Wind Turbines
- Haryana Power Generation Corporation Ltd.
- GEDCOL
- ONGC
- Coal India Limited
- Central Mine Planning and Design Institute
- Indraprastha Power Generation Company Ltd
- Tata Power Company Ltd.
- Gujarat Electricity Regulatory Commission
- BESCOM
- Waaree
- Goldline Contracting LLC
- Gujarat Power Corporation Ltd.
- American Society of Mechanical Engineers
- Paschim Gujarat Vij Company Ltd.
- Frost & Sullivan
- GAIL India Ltd. and many more

PROGRAMME OUTLINE:

DAY-1

PV Foundation Course

- Introduction to Solar Energy
- Solar Radiation and Geometry
- Site Survey and Shadows
- Crystalline Silicon PV Modules
- Inverters, Control Devices and Other BoS
- Hands- on Site Survey
- Batteries

DAY-3

Field Visit to MW Size Power Plant

- Plant Operation and Maintenance
- Best Practices and Trouble Shooting

DAY-5

PV-Syst and kW-Scale PV Plant Installation

- PV-Syst and Detailing
- Hands-on: kW-Scale PV Plant Installation

DAY-2

System Design Course

- Hands-on Solar Resource Measurement and Analysis
- PV System Configurations and Design Philosophy
- PV System Designing and Sizing
- General Arrangement of Switch yard and metering
- General Arrangement of Utility-Scale Power Plant
- Lightning and Surge Protection

DAY-4

Best Practices and Performance

- Standards in Design, Safety and Performance
- PV Array Structural Design
- Opportunities in off grid/micro grids

DAY-6

Project Management of Utility - Scale Power Plant & Economics

- Grid-Connected PV Plant: An EPC Experience
- Economics of Solar PV Projects
- Solar Project Finance - Private Sector Overview
- Project Management
- Solar Scenario in India/State and Opportunities Ahead
- Certificate Distribution & Closing

INSTRUCTORS & GUEST LECTURERS

Dr. Omkar Jani
Principal Research Scientist
GERMI

Mr. Akhilesh Magal
Head, Solar Advisory
GERMI

Dr. Sagar Agravat
Head, R&D
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Mr. Ashish Jasani
Sr. Technical Officer (Civil)
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Mr. Shatrughan Yadav
Technical Officer (Elec.)
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Mr. Pulkit Dhingra
Project Officer
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Mr. Souvnik Roy
Project Officer
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Mr. Arvind Karandikar
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Nexus EnergyTech Pvt. Ltd

Mr. Rajneesh Sharma
Sr. Manager
Consulting, Energy & Resources,
Deloitte Touche Tohmatsu India
LLP

Mr. Vikas Almadi
Director
Dehn India Pvt. Ltd.

Mr. Shyam Sunder
Head- Operations
Studer Innotec (I) Pvt. Ltd.

Mr. Chetan Singh Adhikari
Vice President (Head REC & RPO
Business)
REConnect Energy Trading

Prof. Jignesh Bhatt
Principal Investigator
Solar - City - Smart Grid Project
and Sr. Asst. Prof. Dharmsinh Desai
University

GERMI'S SPOTLIGHT PROJECTS

- Gandhinagar, Bhubaneswar & Vadodara Photovoltaic Rooftop Programme
- 1000+ MW photovoltaic power plant consultancies using various technologies across India like Gujarat, Haryana, Jharkhand, Oriss, J&K, Karnataka, etc.
- Rooftop, Canal-top, Micro-Grid, MW-scale, Solar Parks
- Solar Policies and Regulation Advisory
- Performance and safety testing of photovoltaic modules, inverters, LEDs and various other electrical components
- Third-party inspection of photovoltaic plants
- Establishment of state-wide ITI vocational solar training programme including syllabus development, training of teachers, laboratory setup and student placement

Fee

- **For Indian Nationals** - INR 48,000/- (plus S. Tax)
- **For Foreign Nationals** - USD 1,100/- (incl. of all taxes)

Above fee is per participant

Early Bird Discount:
For participation in 1) Groups,
2) Government/PSU and 3) Full
time students.



GERMI
Organised and
Conducted By

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