

Conference Program Agenda

Balancing Energy Supply & Demand in the region – the need for a complete PV eco-system from materials to power generation

August 1, 2013 (Thu)

- 0930 - 1100 **SOLARCON India 2013 – Inauguration**
- 1130 - 1200 **Inaugural Keynote** - *Dr. Harish Hande - Managing Director, SELCO and Ramon Magsaysay Awardee*
- 1200 - 1230 **Inaugural Keynote** “The Photovoltaic Manufacturing Consortium (PVMC) – Innovative Pathways toward Supply Chain Collaboration” *Prof. Pradeep Haldar – Professor, SUNY at Albany & COO/CTO of US PV Manufacturing Consortium*
- 1400 - 1500 **JNNSM Phase - 2 (2013-2017) Policy Initiatives and Implementation - Industry Interaction**
Address by: Shri. Tarun Kapoor, IAS, Jt. Secretary, MNRE
Implementation Perspectives by: Dr. Ashvini Kumar, Director, Solar Energy Corporation of India
- 1515 - 1630 **CEO Panel “Assessing the Indian Solar Market - Development Prospects and Problems - the big picture”**
CEO panel - Sponsored by Enerparc
Moderated by Dr. Arunabha Ghosh, CEEW; Dr. Arul Shanmugasundram, Tata Power Solar; Basant Jain, Mahindra Solar Business; Pashupathy Gopalan, SunEdison; Prasanth Sakhamuri, HHV; Stefan Müller, Enerparc; Sujoy Ghosh, First Solar
- 1700 - 1730 **Trends in Solar Cell and Module Technology**
Prof. Dr. Roland Schindler, Executive Director, Fraunhofer Center for Sustainable Energy Systems
- 1745 - 1815 **Silicon Solar Cell Research Progress at UNSW**
Prof. Richard Corkish, Head, School of PV and Renewable Energy Engineering, UNSW, Australia & COO, Australian Centre for Advanced Photovoltaics
- 1900 Onwards **Networking Dinner – Sponsored by Jinko Solar**

August 2, 2013 (Fri)

- 0930 - 1100 **Role of States in PV market growth in India**
Panel discussion moderated by Santosh Kamath, KPMG; Kartikeya Misra, IAS, AP-NDCL; Paramita Sahoo, Welspun; SK Prabhakar, KREDL; Venkat Konakandla, Solar Semiconductor; Vish Iyer, Sterling Wilson;
- 1130 - 1300 **Financing Solar – Issues, Options, Perspectives**
Debashish Majumdar, IREDA; Gaurav Sood, Solairedirect, Narsi Santhanam, Energy Alternatives India; SJ Vijay, Salmon Leap Associates; Session chair: Vineeth Vijayaraghavan, Panchabuta
- 1415 - 1530 **Balancing PV supply and demand in India: Re-invigorating Indian Manufacturing**
Panel Discussion moderated by Ivan Saha, Vikram Solar; Dr. Kaushik J. Vaidya, Applied Materials; Rajaram Pai, Dupont; Rajesh Singh, Renewsys; Dr. VSG Rao, Lanco Solar; Ravi Raghavan, Solar Semiconductor
- 1600 - 1700 **Opportunities for Independent Power Producers under India’s REC mechanism**
Panel discussion moderated by Vishal Pandya, REConnect; Rajat Sud, Atria Power; Ravi Khanna, Aditya Birla Group; Krishna Revankar, Emmvee Solar; Vikalp Mundra, M&B Switchgears
- 1715 - 1815 **Rooftop Solar: The next big market driver in India**
Presentations from Akash, PanelClaw; Anmol Jaggi, Gensol; Krishna Revankar, Emmvee Solar; Nimish Jain, Jinko Solar;


August 3, 2013 (Sat)

- 0930 - 1100 **Perspectives on building a complete solar PV eco-system in India**
Panel discussion moderated by Dr. Ashok Das, SunMoksha featuring Ashwin Gambhir, Prayas Energy Group; Prof. Juzer Vasi, NCPRE-IIT-Bombay, Manasij Kar, Enerplus; Vasudev Kalkundri, Syndicate Bank; Venkat Rajaraman, Solarsis;
- 1100 – 1130 **Keynote Talk:**
“Fundamental and Applied R&D for Advancing PV at NREL and the Solar Energy Research Institute for India and the US (SERIUS) by Dr. Bill Tumas, Materials & Chemical Science and Technology Directorate, US-NREL
- 1200 - 1330 **Structures, Safety, Performance & Reliability of PV Installations**
David Wissoker, Spire Solar; Hariharaputhiran, Tata Steel; Himamsu Popuri, Nuevosol; Dr. O.S. Sastry, SEC; Sanjay Chandra, Citel; Vaman Kuber, NCPRE;
- 1430 - 1530 **Energy Conversion, Storage and Efficiency**
Presentations from Giancarlo Chiapparoli, Bonfiglioli; Manoj Pande, Statcon, Dr. Priya Ranjan Mishra, Philips; Anurag Garg, Schneider Electric

One-day workshop on “PV Standards - from Materials and Manufacturing to Systems”

In Association with

 **IEEE** IEEE Standards Association &

 International
Electrotechnical Commission

August 2, Friday, 0930 – 1730

Co-located at **SOLARCON India 2013**

Workshop Sponsor
Underwriters Laboratories



PV standards are a topic of great interest and relevance, especially with rapid growth in installations, in India, and with components being sourced from across the world. There is direct interest among installers, end users and developers in quality, reliability and performance standards, best practices for reliable installations, component benchmarks and field-performance indicators.

This workshop will provide you the latest updates from leading standards bodies, practicing industry professionals and testing/certification agencies on the most relevant aspects of standards for PV.

There will also be discussion of global manufacturing standards development activities, standards needs specific to India and the need for greater participation by Indian manufacturers in standards development activity.

The workshop is suitable for PV manufacturing industry professionals, PV system integrators, PV plant developers, EPC organizations and others involved in the design and deployment of solar PV solutions.

Agenda

- 0930 – 1000 Standards in PV - Needs, overview, introduction
 - Dr. Jatin Roy, Vice-President, R&D+Engineering, Solar Semiconductor
- 1000 – 1030 PV Standards Status: Modules, Power Electronics and BoS
 - Dr. O.S. Sastry, Solar Energy Center, Gurgaon
- 1115 – 1200 IEEE Standards Related Activities for Smart Grid and Renewables
 - Samuel Sciacca, IEEE Task Force on Smart Grids
- 1200 – 1245 Standards based Conformity Assessment
 - Ravi Subramaniam, Technical Director, IEEE Conformity Assessment Program (ICAP)
- 1400 – 1445 PV Best Practices - Safety, Reliability & Performance
 - Dr. Jaeckel Bengt, Principal Engineer (Germany) - Renewables, Underwriters Laboratories
- 1515 - 1600 IEC standards in the field of PV and other renewable energies
 - Charles Jacquemart, Technical Officer, IEC – International Electrotechnical Commission
- 1630 – 1645 Manufacturing Standards in PV
 - Bettina Weiss, SEMI
- 1645 – 1730 Open discussion - "How to represent India in Global PV Standards Programs"
 - Moderated by Dr. Satyendra Kumar, CTO Lanco Solar & SEMI

SEMI India
in technical collaboration with
the National Centre for Photovoltaic Research and Education (NCPRE)
at IIT Bombay

One-day Tutorial
" Introduction to solar PV system sizing"

Co-located at
KTPO, Whitefield, Bangalore

SOLARCON[®]
India2013

Solar photovoltaics (PV) is poised to make inroads into all of our lives with the price of solar PV modules and systems dropping extremely rapidly in the last few years. In applications ranging from rural and urban household electrification to industrial/agricultural/commercial and community needs and large scale grid connected power plants, solar PV is becoming very compelling. India is particularly suitable for PV given its high solar insolation and severe power shortages.

Attend this tutorial to for a concise introduction to the basics of PV components and an understanding of PV system sizing, from experts

The short course is suitable for:

- Practicing engineers and technicians
- Academic/research staff and students
- New entrants into PV including entrepreneurs and individuals

Although the tutorial is basic, it will be technical in content. A basic understanding of electrical and other engineering principles is required.

Tutorial Outline & Schedule

Please check back here for final details.

Aug 2, Friday

- 0915-1000
Introduction to Tutorial and Participants Introduction
Prof. C.S. Solanki and Vaman Kuber, NCPRE/IIT Bombay
- 1000-1130
Solar resource, PV Cell and Module Technology Basics
Prof. Chetan Singh Solanki, IIT Bombay

Introduction to solar irradiation, geographical considerations, introduction to basic PV cell operation, cell & module construction, module electrical characteristics & derating with temperature & age; module spec sheet parameters, effect of shading, quick look at c-Si, thin film and other technologies and pros/cons of each

Aug 2, Friday
Venue

KTPO, Whitefield
Bangalore

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For more information
contact:
SEMI India
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+91 80 4040 7103

Earlier SEMI-NCPRE
Short Courses

[Rooftop PV Power
Plant Design and
Implementation](#)
May 15-16-17, 2013
Pune

[Solar PV Power
Systems: Concepts,
Operation &
Applications](#)
Aug 24-26, 2011,
Jaipur

[Grid Connected Solar
PV Power Systems:
Design & Integration](#)
Nov 8, 9 & 11, 2011,
Hyderabad

- 1200-1330

Battery, Charge Controller, Inverter & PV Systems Design Basics

Vaman Kuber, NCPRE, IIT Bombay

MPPT, charge controller, battery, inverter & discussion of spec sheet & considerations in selection of each, PV-inverter matching; module interconnections/strings; string versus central inverter; grid-support systems, quick look at a grid connected system & additional components of off-grid systems, component sizing considerations

- 1430-1630

PV Systems Design/PV-Battery-Inverter Sizing Exercise

Prof. Chetan Singh Solanki & Vaman Kuber, NCPRE, IIT Bombay

Hands on exercise to design a basic PV system (including PV, battery and inverter-charger sizing) given a sample set of loads & consumption pattern, available space area measurements, spec sheets of module, battery and inverter-charger.

- 1700-1800

Q&A and Interaction

The National Centre for Photovoltaic Research and Education (NCPRE) at IIT Bombay (www.ncpre.iitb.ac.in) was launched in 2010 as a part of the Jawaharlal Nehru National Solar Mission of the Government of India. The objective of the center is to be the one of the leading Photovoltaic (PV) research and education centers in the world within the next decade. The NCPRE website is: <http://www.ncpre.iitb.ac.in>

SEMI[®] is the global industry association serving the manufacturing supply chain for the micro- and nano-electronics industries, including **Photovoltaics (PV)**. SEMI's mission is to advance industry growth, support continuous efficiency improvements and promote sustainable business practices through international standards development, events, public policy advocacy, EHS support, market intelligence, and other services. SEMI & PV Group websites: www.semi.org & www.pvgroup.org.

[Off-grid Solar PV Components and Systems](#)
[April 11-13, 2012, New Delhi](#)

[Thin Film PV Technology - Cells to Systems](#)
[4-6 September 2012, Bangalore](#)