

Two-Day CEP Course on

SOLAR PHOTOVOLTAIC TECHNOLOGIES:

*An Introduction for Entrepreneurs, Investors and Policy
makers*

Nov. 3-4, 2008



Introduction and Course Outline

Solar photovoltaic (PV) technologies provide an attractive renewable energy solution for growing energy demands of the world. PV industry is registering very high growth rate, more than 30%, since last 10-15 years and its annual production has crossed a volume of 4000 MWp (4 GWp).

Wafer based crystalline silicon (c-Si), amorphous Si (a-Si), Copper-Indium-Gallium-Selenide (CIGS), Cadmium Telluride (CdTe) are known technologies for PV that are presently in production. Among these, crystalline Si is dominant PV technology and captures over 90% of the PV market, in order to sustain the growth significant amount (>100,000 MTons) of solar grade Si is estimated to come out in the market.

Relatively higher cost of PV generated energy prohibits its widespread use in terrestrial applications. Therefore fundamental research work is intensively being done on so-called second generation or thin-film PV technologies to bring down the cost. In current scenario amorphous Si, CdTe and CIGS solar cells are being manufactured at commercial level. While the thin-film crystalline Si solar cells and thin-film organic solar cells etc. will be one of the technologies of the future. Concentrator PV technologies show great

potential to reduce silicon consumption and reduce the cost of converted energy, particularly for countries like India.

The purpose of this course is to give a clear understanding of solar PV technologies to an entrepreneur who would like to embark on commercialization of solar PV technologies. In this context, clarity on range of technologies, their fundamental limitations as well as advantages, their cost effectiveness, material aspects of technologies etc. needs to be understood, at least at a broad level. Apart from the discussion fundamental concepts in solar PV the course will also highlight the various technologies which are commercialized and the one that may become the technology of the future.

Who may benefit from this course

Anybody who is looking to get some information about solar PV technologies, the one who would like to know about the world scenario of these technologies, the one who would like to become an entrepreneur of solar PV technologies, one who like to invest in solar PV technologies, The course is designed in such a way that individual from any background should be able follow through the course.

Course content

The course will contain following topics from solar PV technologies. The topics will have orientation such that the participant gets basic understanding which is normally required for their decision making.

- The world energy scenario
- Materials used in solar cells
- What is a solar cell? How it works?
- Basics of Si solar cell technology
- Production of Si
- Basics of Thin film cell technologies (particularly amorphous Si)
- Basics of Concentrator cell technologies
- Introduction to advance solar cells and materials
- Introduction to Solar PV system design and other system components.
- Cost analysis

(Note - The course material in the form of hard copy will be provided to the participants)

Pre-requisite

Any individual with interest in solar PV technologies can join the course.

Who may benefit

This course will be very useful to:

- Entrepreneurs
- Investors
- Policy makers

Venue

Seminar Hall, Institute Guest House, IIT Bombay, Powai, Mumbai-76

Course fee

Participants	Full course (two days)
Delegates from Industry	Rs. 8000
Others	Rs. 6000

Number of Participants

Restricted to 20

Accommodation

No accommodation will be provided inside the IITB campus.

Last date of registration

Friday, 31st Oct. 2008

How to Apply

Applicants may mail the filled up Registration form along with the draft drawn in favour of “The Registrar IIT Bombay (CEP A/c)” to the Course Coordinator for confirmation of registration in the course (only 20 seats).

The DD for the course fee can also be submitted on 31st Oct. before the start of the course. The fee can also be paid in cash at the registration counter on 31st Oct.

Kindly note that no income tax is to be deducted at source from the course fee payments, as IIT Bombay is exempt from the same.

Please send your registration form / queries or any other communication to the

Course Coordinator:

Prof. Chetan Singh Solanki
Course Coordinator
Department of Energy Science and Engineering
Indian Institute of Technology Bombay
Powai, Mumbai-400 076
Phone: +22 2576 7985 (O)
2576 8895 (R) 2572 1248
Fax : +22 2576 4890
Email : chetanss@iitb.ac.in
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**Office of
Continuing Education Programme,
Indian Institute of Technology, Bombay
Powai, Mumbai - 400 076**

For information on other Continuing Education Programmes at IITB, contact:

PROF-IN-CHARGE (CEP)
OFFICE OF
CONTINUING EDUCATION PROGRAMME (CEP)
INDIAN INSTITUTE OF TECHNOLOGY,
POWAI, MUMBAI - 400 076.
Tel. No. : 2572 6199 (D), 2576 7060.
Email : cep@iitb.ac.in

For latest information on CEP, please visit our home page at: <http://www.iitb.ac.in/~cep/>

REGISTRATION FORM

Two CEP Course on

Solar Photovoltaic Technologies:

An Introduction for Entrepreneurs and Investors

NAME (PRINT):

_____ Gender: M / F

DESIGNATION:

ORGANIZATION:

MAILING ADDRESS:

TELEPHONE: _____ (O) _____ (R)

FAX: _____ MOBILE: _____

EMAIL : _____

PAYMENT: D.D. No.: _____ Dt.: _____

Rs.: _____ (DD in favour of `Registrar, IIT Bombay – CEP a/c')

(Guest House bill to be paid directly by participant.)

Date:

Signature of Applicant

(Note: Make photocopy of the registration form if required)

