Certification Course

on

Introduction to Solar PV systems

Co ordinator: Sri K.Rama Mohan Reddy

Date(s) of Event : 16/11/2020 to 04/12/2020

Organizing department: Electrical and Electronics Engineering

K.S.R.M.COLLEGEOFENGINEERING

(UGC-AUTONOMOUS)

Kadapa,Andhra Pradesh,India–516 005

Approved by AICTE, New Delhi & Affiliated to JNTUA, Ananthapuramu.

Cr./KSRMCE/(Department of EEE)/2020-2021

Date: 10/11/2020

To

The Principal,

KSRM College of Engineering,

Kadapa.

Respected Sir

Sub: KSRMCE-(Department of EEE) permission to conduct certification course on "Introduction to Solar PV Systems"-Request-Regd.

It is brought to your kind notice that, with reference to the cited, the EEE department is planning to conduct Certification Course on "Introduction to Solar PV Systems" for B.Tech, III sem Students from 16 November,2020 to 04December ,2020.In this regard I kindly request you to grant permission to conduct the certification course. This is submitted for your kind perusal.

Thanking you sir,

Forwarded to principal sir

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Cuddapah - 516 003

Yours Faithfully

Sri K.Rama Mohan Reddy

Asso.Prof,Dept.EEE

KSRMCE,Kadapa.

Permitted

V. S. Murthy

PRINCIPAL
K.S.R.M. COLLEGE OF ENGINEERING
KADAPA - 516 003. (A.P.)

To the Director for Information

To All Deans/HoD's/IQAC

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Cr./KSRMCE/(Department of EEE)/2020-2021

Date: 10/11/2020

Circular

All the B.Tech III Sem EEE students are here by informed that department of EEE is going to conduct certificate course on "Introduction to Solar PV Systems" for B.Tech, III sem Students from 16th November,2020 to 04th December ,2020" Interested students may register their names on or before 14th November,2020 before 5 Pm.

For any queries contact faculty coordinator :

Sri K.Rama Mohan Reddy,Asso.Prof,Dept.EEE,KSRMCE,Kadapa.

10/11/2020

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Department of Electrical and Electronics Engineering

Certification Course on Introduction to solar PV systems

Registration Form

S.No	Name of the Student	Roll Number
1	BANDI SAI SREE (W)	199Y1A0201
2	BOLISETTY VENKATA CHARITHA (W)	199Y1A0202
3	BUKKEY CHANDRA SEKHAR NAIK	199Y1A0203
4	BUSIREDDY PARVATHAMMAGARI EKSHITHA (W)	199Y1A0204
5	CHINNADI PRAMOD JOSHI	199Y1A0206
6	CHITTIBOINA HARI PRASAD	199Y1A0207
7	**CHOWDAM MOHAN KRISHNA**	**199Y1A0208**
8	**DERANGULA NAVEEN SAI**	**199Y1A0209**
9	DODDA MAREPPA GARI BOJE GOWD	199Y1A0210
10	DURNOOTHALA REDDYVARI GAYATHRI (W)	199Y1A0212
11	GANDHAM NITHYA CHANDANA (W)	199Y1A0213
12	**GORLA UMA MAHESWAR REDDY**	**199Y1A0214**
13	**GUDUMCHARLA ASHOK**	**199Y1A0215**
14	GUDURU ANAND	199Y1A0216
15	GUNDLURU SAI PUNEETH KUMAR	199Y1A0217
16	JESTADI PRAVEENKUMAR	199Y1A0218
17	**KADIRI NAVEEN**	**199Y1A0219**
18	KALVAPALLI PAVITHRA (W)	199Y1A0220
19	KAMMARI NITHISH KUMAR	199Y1A0221
20	KATHERAPALLE SAMARA SIMHA REDDY	199Y1A0222
21	KATLAGALLU NIKHAT SULTHANA (W)	199Y1A0223
22	KATTA VENKATA SAI SREEDHAR	199Y1A0224
23	KONGANI VENKATA RAMANA	199Y1A0225
24	KORRAPATI SAKESH REDDY	199Y1A0226
25	MADAKABOYINA RAM MOHAN	199Y1A0227
26	MANDA KIRAN BABU	199Y1A0228
27	MIDDE GURU TEJA	199Y1A0231
28	MULA SUPRAJA (W)	199Y1A0233
29	**NAGIREDDY MANIKANTA REDDY**	**199Y1A0234**
30	NAGURU SAI JYOTHI (W)	199Y1A0235

31	NAMALA INDU (W)	199Y1A0236
32	PAGALA BUJJI **(W)**	199Y1A0237
33	PEDDAMAVIREDDYGARI CHINNA PEDDI REDDY	199Y1A0238
34	PONNOLI SUMANTH KUMAR	199Y1A0240
35	POTTOLLA GIRIDHAR	199Y1A0242
36	SHAIK SAMEER BASHA	199Y1A0244
37	SIRIGI REDDY LOKENDRA REDDY	199Y1A0245
38	**SIRIGIREDDY HARI KRISHNA REDDY**	**199Y1A0246**
39	SUNKESALA YESWANTH REDDY	199Y1A0247
40	SYED ASMA FARHEEN (W)	199Y1A0248
41	SYED KHAMAR HUSSAIN	199Y1A0249
42	TADIGOTLA SOWMYA (W)	199Y1A0250
43	**THUMMALURI JYOTHI BHARGAVI (W)**	**199Y1A0251**
44	**TIRUMALA SETTY PRUDHULA (W)**	**199Y1A0252**
45	VALLURU DIVYA TEJA (W)	199Y1A0253
46	**VUTUKURU KRANTI KUMAR REDDY**	**199Y1A0254**
47	YAPARALA YESHASWINI (W)	199Y1A0256
48	YERRAGUDIPADU CHANDRA KALA	199Y1A0257
49	B.Swathi	209Y5A0201
50	S.Shaikshavali	209Y5A0202
51	K .Rakesh	209Y5A0204
52	S Sravana Sandhya	209Y5A0206

Coordinator

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Syllabus of Course

Sl. No.	Topic	Hours
		Theory
Module 1	Basics of Electricity Voltage, Current, DC Power, AC Power, Energy, Harmonics, Solar Radiation.	08
Module 2	Solar Photovoltaic Solar Cell and its function, Solar Technologies, Solar Cell Parameters, Efficiency of Solar Cell, Solar PV Module, Rating of Solar PV Module	08
Module 3	Solar Photovoltaic Connection of PV Module in Series and Parallel, Estimation andMeasurement of PV Module Power, Selection of PV Module.	08
Module 4	Batteries Battery function, Types of Batteries, Battery parameters, Selection of Battery, Series Parallel combination of Batteries, Batteries for Photo voltaic System, Application of Batteries in Solar PV system, Battery Maintenance and Measurements.	08

Textbook

Honsberg, C., and S. Bowden. *Photovoltaics: Devices, Systems and Applications CD-ROM*. [A free online resource.]

References Books

Wenham, S., M. Green, et al., eds. *Applied Photovoltaics*. 2nd ed. Routledge, 2006. ISBN: 9781844074013. [Preview with Google Books]

Luque, A., and S. Hegedus, eds. *Handbook of Photovoltaic Science and Engineering*. John Wiley & Sons, Ltd, 2003. ISBN: 9780471491965.

Yu, P., and M. Cardona. *Fundamentals of Semiconductors: Physics and Materials Properties*. 3rd ed. Springer, 2004. ISBN: 9783540413233. [Preview with Google Books]

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Department of Electrical and Electronics Engineering

Certification Course on Introduction to Solar PV Systems

Schedule/ Timing: 4:00pm – 6:00pm

S.No	Date	Course Coordinator	Topic Coverd
1	16/11/2020	Sri M.Bhaskar Reddy	**Solar Photovoltaic** Solar Cell and its function, Solar Technologies, Solar Cell Parameters, Efficiency of Solar Cell, Solar PV Module
2	17/11/2020	Sri M.Bhaskar Reddy	**Solar Photovoltaic** Connection of PV Module in Series and Parallel, Estimation andMeasurement of PV Module Power, Selection of PV Module.
3	18/11/2020	Sri K.Rama Mohan Reddy	**Batteries** Battery function, Types of Batteries,
4	19/11/2020	Sri M.Bhaskar Reddy	Battery parameters, Selection of Battery,
5	20/11/2020	Sri M.Bhaskar Reddy	Series Parallel combination of Batteries, Batteries for Photo voltaic System.
6	21/11/2020	Sri M.Bhaskar Reddy	Application of Batteries in Solar PV system
7	23/11/2020	Sri K.Rama Mohan Reddy	**Charge Controller** Power MOSFET Specification of Inverter and charger.
8	24/11/2020	Sri K.Rama Mohan Reddy	Full Bridge Inverter, Voltage and Current Feedback, DC to DC power converter
9	25/11/2020	Sri M.Bhaskar Reddy	DC to AC Converter, AC to DC Converter,
10	26/11/2020	Sri M.Bhaskar Reddy	Battery Charge controller
11	27/11/2020	Sri M.Bhaskar Reddy	**Solar PV System Design** Solar Radiation Energy Measurements
12	28/11/2020	Sri M.Bhaskar Reddy	Estimating Energy requirement,Types of Solar PV System,
13	01/11/2020	Sri M.Bhaskar Reddy	Design methodology for SPV system,
14	02/11/2020	Sri M.Bhaskar Reddy	Design and Development of Solar Street Light and Solar Lantern
15	03/11/2020	Sri M.Bhaskar Reddy	Off Grid Solar power Plant.
16	04/11/2020	Sri M.Bhaskar Reddy	Design of Off Grid Solar Power Plant

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Department of Electrical and Electronics Engineering

Activity Report

Name o f the Event	: Certificate Course on "Introduction to solar PV systems"
Date(s) of the Event	: 16/11/2020 to 04/12/2020
Scheduled Time	: 4.00 to 6.00PM
Target Audience	: B.Tech III Sem
Course Coordinator	: Sri K.Rama Mohan Reddy - Asso.Prof
VenueoftheEvent.	: online(https://meet.google.com/lookup/egkgoynkys)

ActivityDescription:

Department of EEE organized a certification Corse on "Introduction to solar PV systems' for B.Tech III sem Students . Sri M.Bhaskar Reddy sir has explained about Solar Photovoltaic systems, the VI characteristics, Estimation of PV characteristics of a solar panel, PV module, Measurement of V-I characteristics of a solar panel at various levels of isolation, and the identification of the equivalent circuit parameters.

Coordinator

HOD

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Principal

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Certificate Course on

" INTRODUCTION TO SOLAR PV SYSTEMS"

16/11/20 -04/12/2020

Organized by

DEPARTMENT OF
ELECTRICAL AND ELECTRONICS ENGINEERING

K.S.R.M.COLLEGEOFENGINEERING

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Department of Electrical and Electronics Engineering

Certification Course on Introduction to Solar PV systems

Attendance Sheet

S.No	Name of the Student	Roll List	16/11	17/11	18/11	19/11	20/11	21/11	23/11	24/11	25/11	26/11	27/11	28/11	01/11	02/11	03/11	04/11
1	BANDI SAI SREE	199Y1A0201	✓	✓	✓	✓	✓	A	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
2	B.VENKATA CHARITHA	199Y1A0202	✓	A	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
3	B. CHANDRA SEKHAR NAIK	199Y1A0203	✓	✓	✓	A	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
4	B.PARVATHAMMAGARI EKSHITHA	199Y1A0204	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
5	C.PRAMOD JOSHI	199Y1A0206	✓	✓	✓	✓	✓	A	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
6	CHITTIBOINA HARI PRASAD	199Y1A0207	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	A	✓
7	C. MOHAN KRISHNA	199Y1A0208	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
8	DERANGULA NAVEEN SAI	199Y1A0209	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	A	✓	✓	✓	✓	✓
9	DODDA BOJE GOWD	199Y1A0210	✓	✓	A	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
10	D.REDDYVARI GAYATHRI	199Y1A0212	✓	✓	✓	✓	✓	✓	✓	✓	A	✓	✓	✓	✓	✓	✓	✓
11	G. NITHYA CHANDANA	199Y1A0213	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	A

12	GORLA UMA MAHESWAR REDDY	199Y1A0214	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	A
13	G. ASHOK	199Y1A0215	A	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
14	GUDURU ANAND	199Y1A0216	✓	✓	✓	✓	✓	A	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
15	GUNDLURU SAI PUNEETH KUMAR	199Y1A0217	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
16	JESTADI PRAVEENKUMAR	199Y1A0218	✓	✓	✓	A	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
17	KADIRI NAVEEN	199Y1A0219	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
18	KALVAPALLI PAVITHRA	199Y1A0220	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
19	KAMMARI NITHISH KUMAR	199Y1A0221	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	A	✓	✓	✓	✓	✓
20	KATHERAPALLE SAMARA SIMHA REDDY	199Y1A0222	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
21	K. NIKHAT SULTHANA	199Y1A0223	A	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
22	KATTA VENKATA SAI SREEDHAR	199Y1A0224	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	A	✓	✓	✓	✓
23	KONGANI VENKATA RAMANA	199Y1A0225	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
24	KORRAPATI SAKESH REDDY	199Y1A0226	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
25	MADAKABOYINA RAM MOHAN	199Y1A0227	✓	✓	✓	✓	✓	✓	✓	✓	✓	A	✓	✓	✓	✓	✓	✓
26	MANDA KIRAN BABU	199Y1A0228	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
27	MIDDE GURU TEJA	199Y1A0231	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	A	✓	✓
28	MULA SUPRAJA	199Y1A0233	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
29	N. MANIKANTA REDDY	199Y1A0234	✓	✓	✓	✓	A	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
30	NAGURU SAI JYOTHI	199Y1A0235	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
31	NAMALA INDU	199Y1A0236	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	A
32	PAGALA BUJJI	199Y1A0237	✓	✓	✓	✓	✓	✓	A	✓	✓	✓	✓	✓	✓	✓	✓	✓
33	PEDDAMAVIREDDYGARI CHINNA PEDDI REDDY	199Y1A0238	A	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

34	P.SUMANTH KUMAR	199Y1A0240	A	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
35	P. GIRIDHAR	199Y1A0242	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
36	SHAIK SAMEER BASHA	199Y1A0244	✓	✓	✓	✓	✓	✓	A	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
37	S.LOKENDRA REDDY	199Y1A0245	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
38	S.HARI KRISHNA REDDY	199Y1A0246	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
39	S.YESWANTH REDDY	199Y1A0247	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
40	SYED ASMA FARHEEN	199Y1A0248	✓	✓	✓	A	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
41	SYED KHAMAR HUSSAIN	199Y1A0249	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
42	TADIGOTLA SOWMYA	199Y1A0250	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
43	THUMMALURI JYOTHI BHARGAVI	199Y1A0251	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	A
44	T. SETTY PRUDHULA	199Y1A0252	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
45	VALLURU DIVYA TEJA	199Y1A0253	A	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
46	V. KRANTI KUMAR REDDY	199Y1A0254	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
47	YAPARALA YESHASWINI	199Y1A0256	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
48	Y.CHANDRA KALA	199Y1A0257	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	A	✓	✓	✓	✓	✓
49	B.Swathi	209Y5A0201	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
50	S.Shaikshavali	209Y5A0202	✓	A	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
51	K .Rakesh	209Y5A0204	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
52	S Sravana Sandhya	209Y5A0206	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	A

Coordinator

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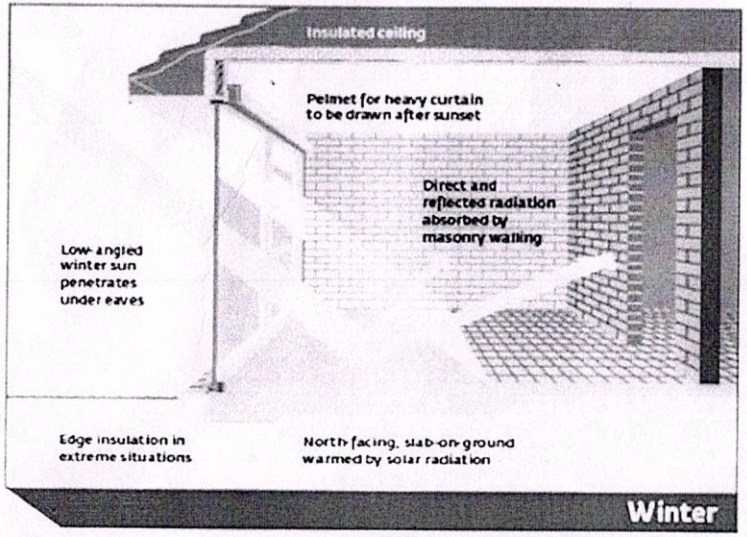
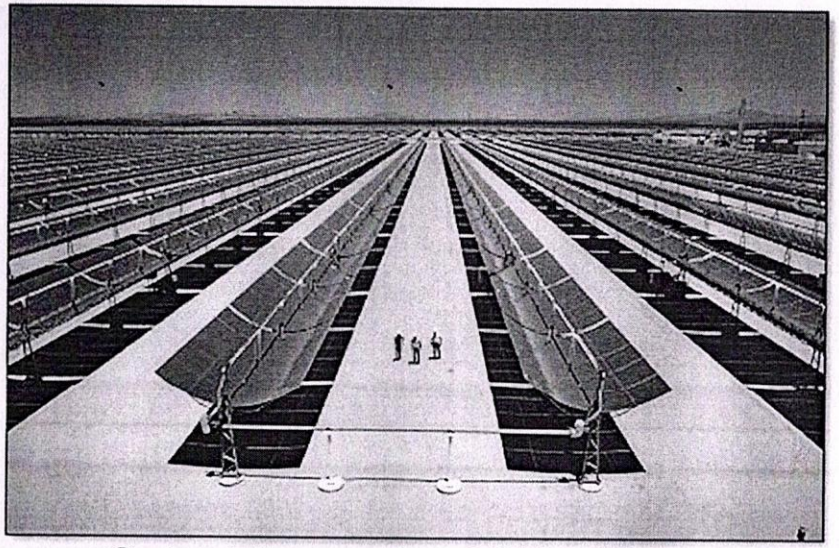
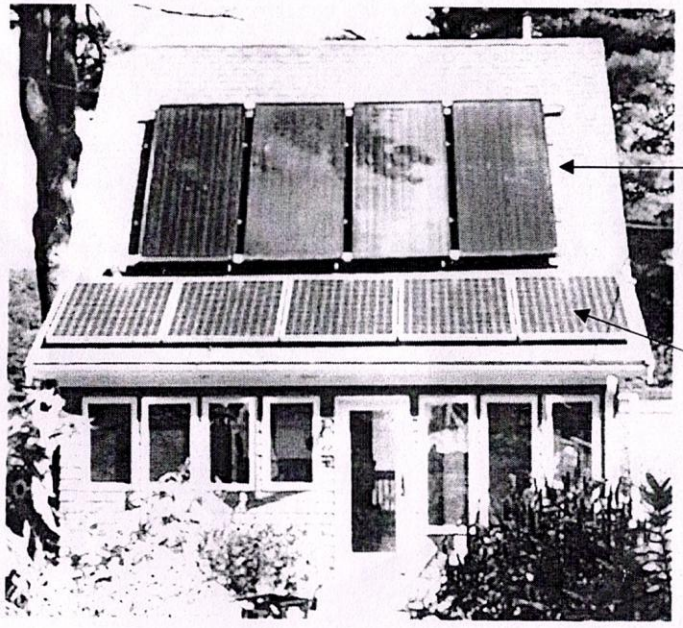
Methods of Harvesting Sunlight



Passive: cheap, efficient design; block summer rays; allow winter



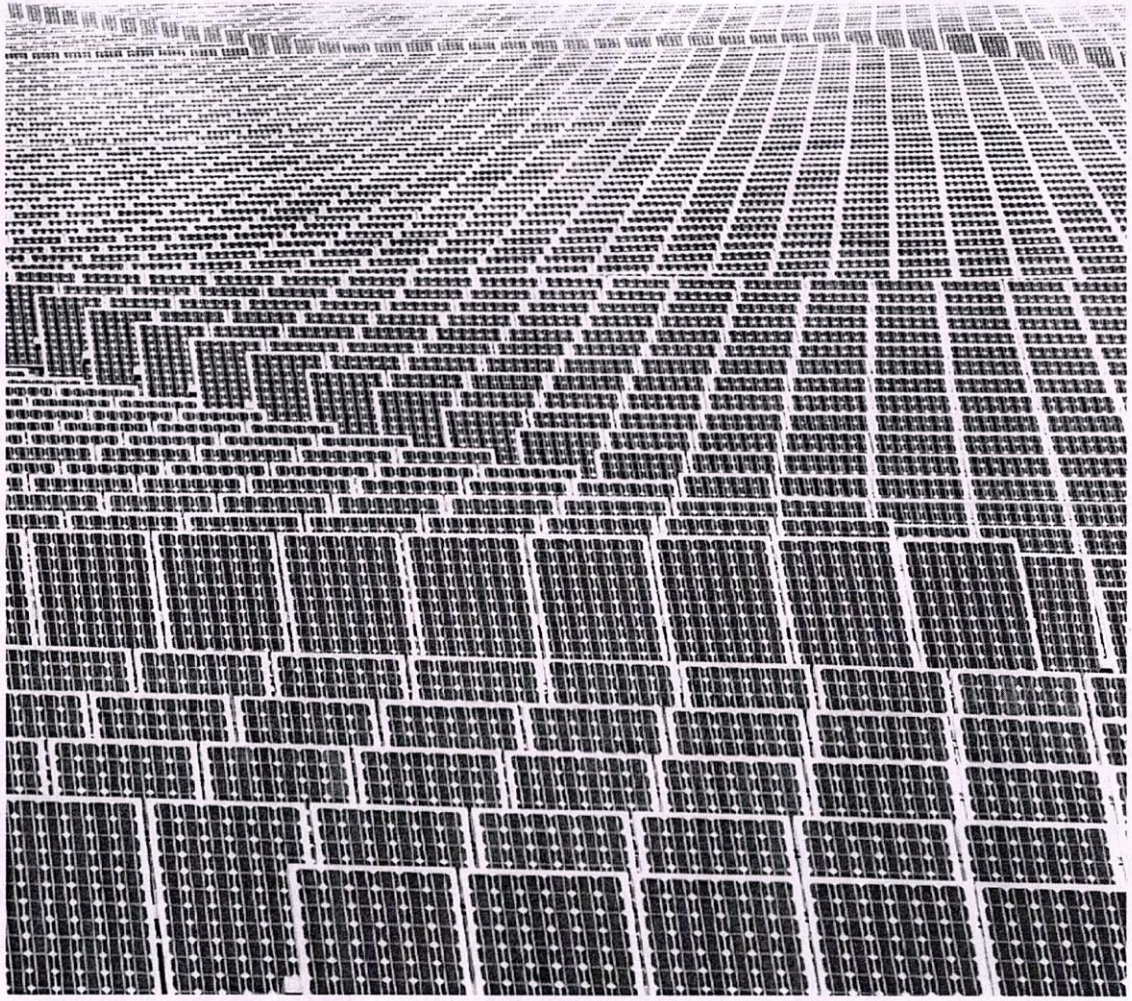
Solar Thermal: ~30% efficient; cost-competitive; requires direct sun; heats fluid in pipes that then boils water to drive steam turbine



Solar hot water: up to 50% efficient; several $k to install; usually keep conventional backup; freeze protection vital (even in S.D.!!)

Photovoltaic (PV): direct electricity; 15% efficient; $5 per Watt to install without rebates/incentives; small fraction of roof covers demand of typ. home

Biofuels, algae, etc. also harvest solar energy, at few % eff.

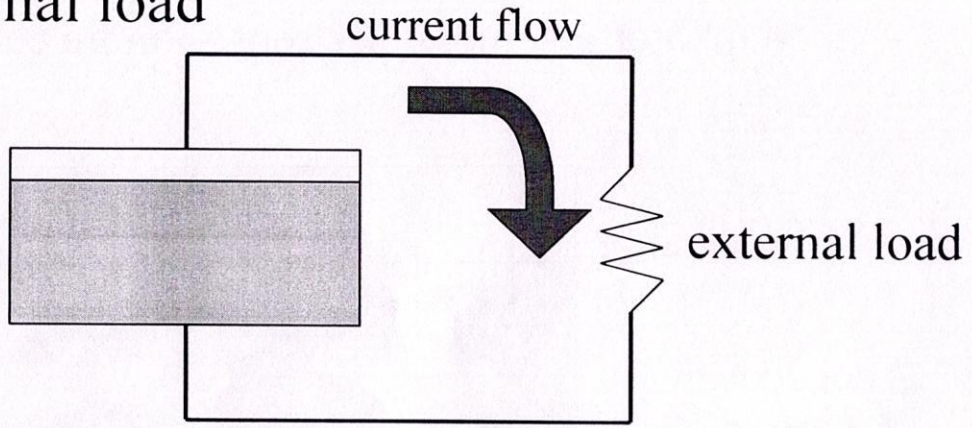


Solar Photovoltaics

Making Electricity from Sunlight

Provide a circuit for the electron flow

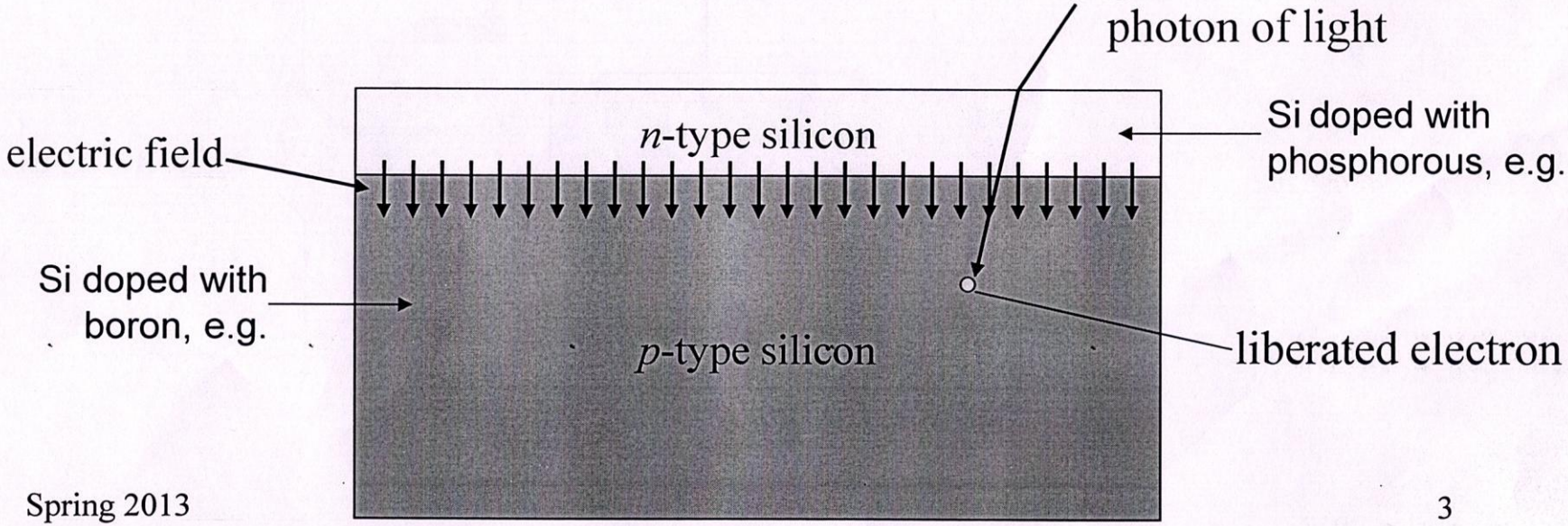
- Without a path for the electrons to flow out, charge would build up and end up canceling electric field
  - must provide a way out
  - direct through external load



  - PV cell acts like a battery

Photovoltaic (PV) Scheme

- Highly purified silicon (Si) from sand, quartz, etc. is "doped" with intentional impurities at controlled concentrations to produce a p-n junction
  - p-n junctions are common and useful: diodes, CCDs, photodiodes, transistors
- A photon incident on the p-n junction liberates an electron
  - photon disappears, any excess energy goes into kinetic energy of electron (heat)
  - electron wanders around drunkenly, and might stumble into "depletion region" where electric field exists (electrons, being negative, move *against* field arrows)
  - electric field sweeps electron across the junction, constituting a current
  - more photons → more electrons → more current → more power

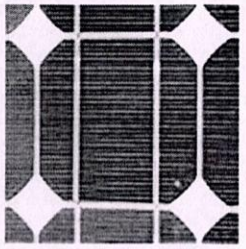


How good can it get?

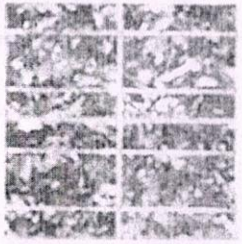
- Silicon is transparent at wavelengths longer than 1.1 microns (1100 nm)
  - 23% of sunlight passes right through with no effect
- Excess photon energy is wasted as heat
  - near-infrared light (1100 nm) typically delivers only 51% of its photon energy into electrical current energy
    - roughly half the electrons stumble off in the wrong direction
  - red light (700 nm) only delivers 33%
  - blue light (400 nm) only delivers 19%
- All together, the maximum efficiency for a silicon PV in sunlight is about 23%
  - defeating "recombination loss" puts the limit in the low 30's %

PV types

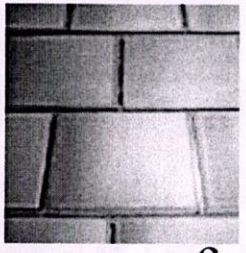
- Single-crystal silicon
  - 15–18% efficient, typically
  - expensive to make (grown as big crystal)



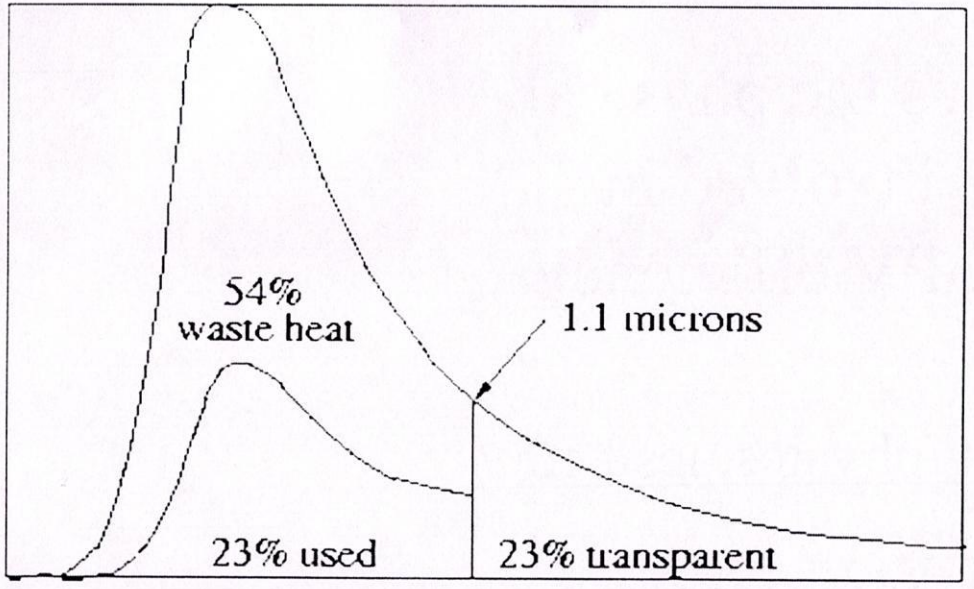
- Poly-crystalline silicon
  - 12–16% efficient, slowly improving
  - cheaper to make (cast in ingots)



- Amorphous silicon (non-crystalline)
  - 4–8% efficient
  - cheapest per Watt
  - called “thin film”, easily deposited on a wide range of surface types



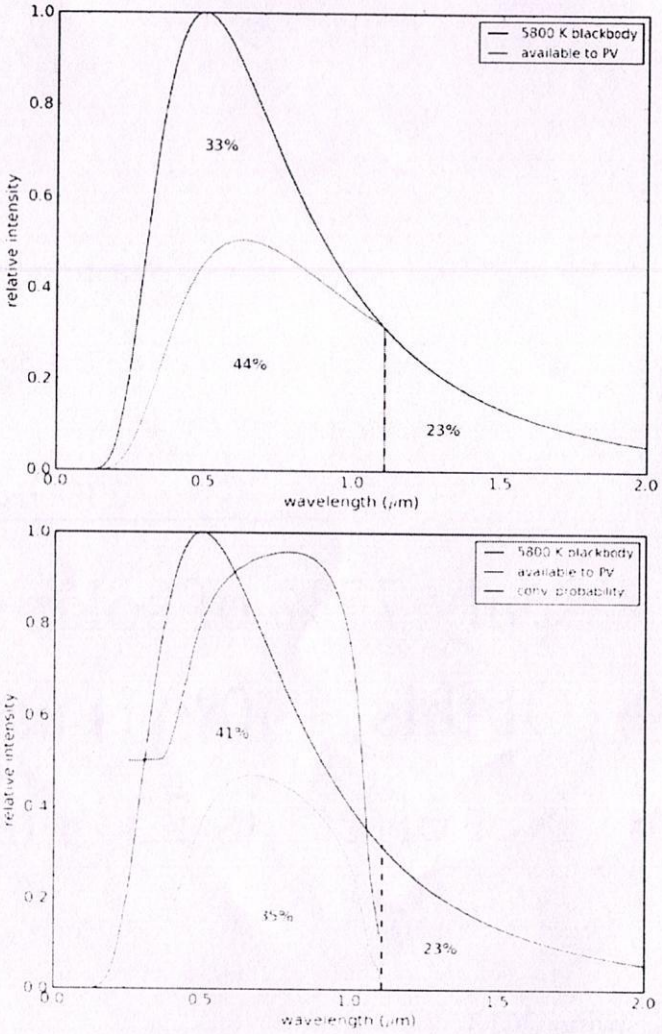
Silicon Photovoltaic Budget



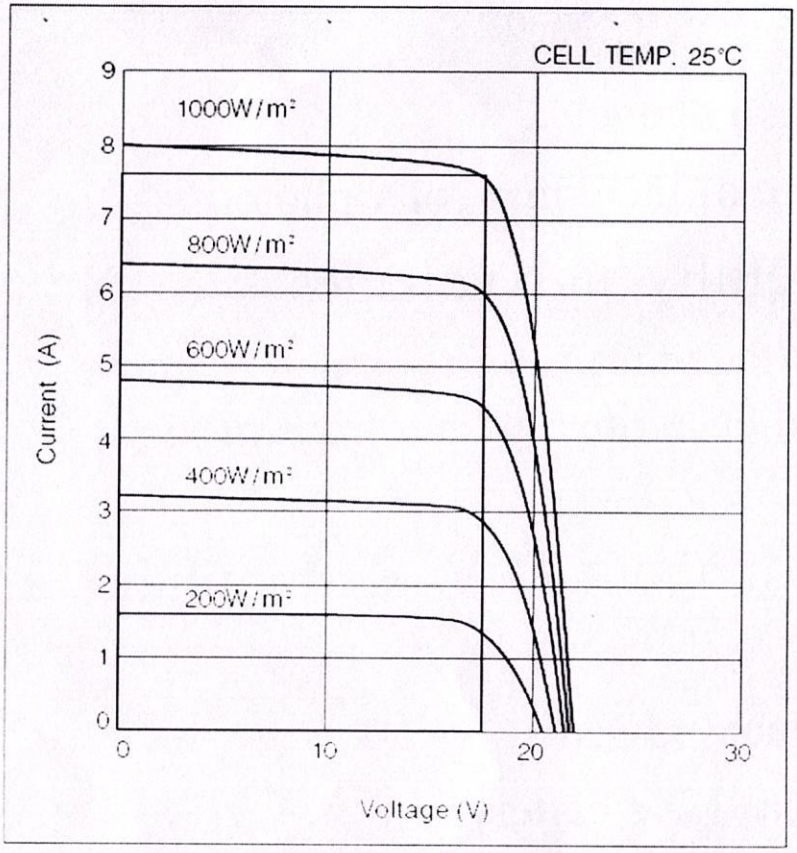
- Only 77% of solar spectrum is absorbed by silicon
- Of this, ~30% is used as electrical energy
- Net effect is 23% maximum efficiency

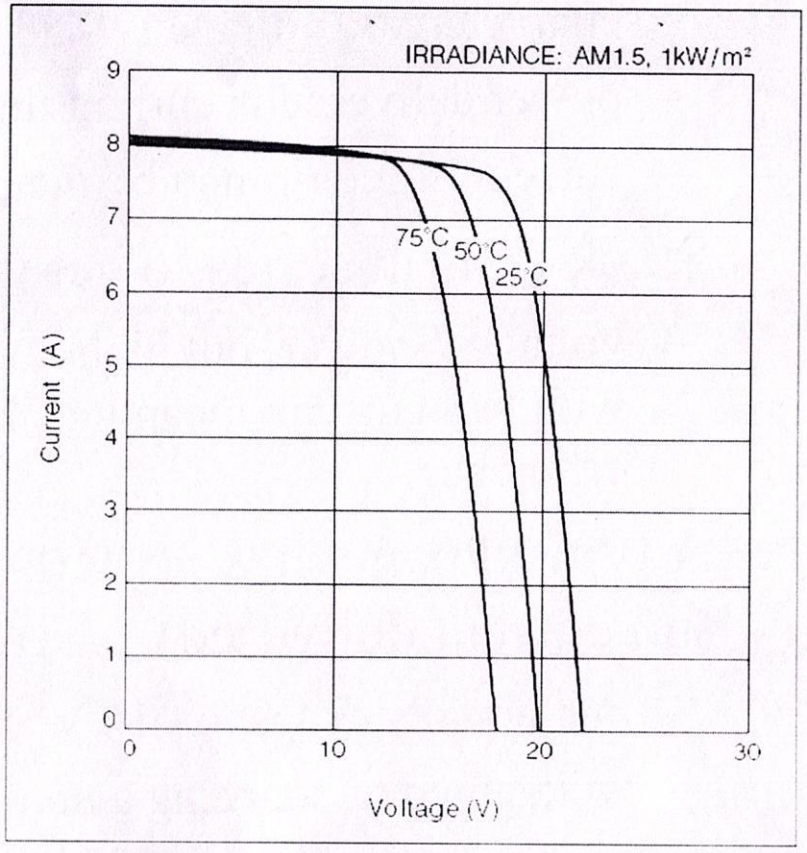
More Detail on Do the Math site

- Explains the physical factors involved in setting PV efficiency limits
  - http://physics.ucsd.edu/do-the-math/2011/09/dont-be-a-pv-efficiency-snob/



Typical I-V curves

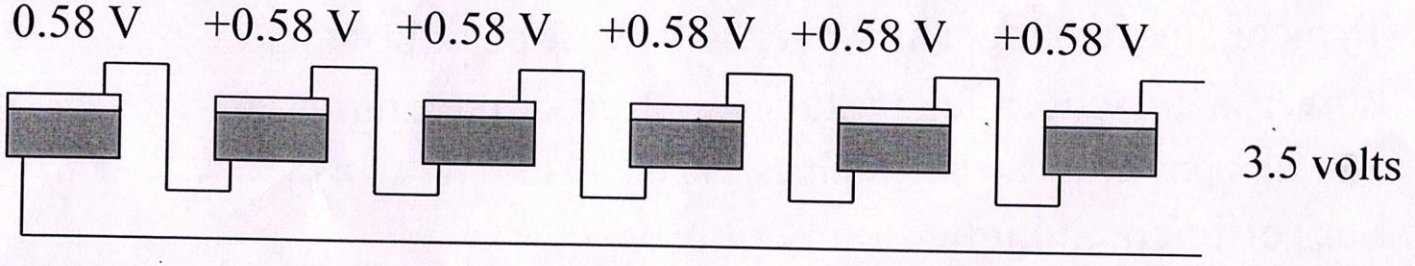




- Typical single panel (this one: 130 W at peak power)
- Power is current times voltage, so area of rectangle
  - max power is 7.6 amps times 17.5 V = 133 W
- Less efficient at higher temperatures

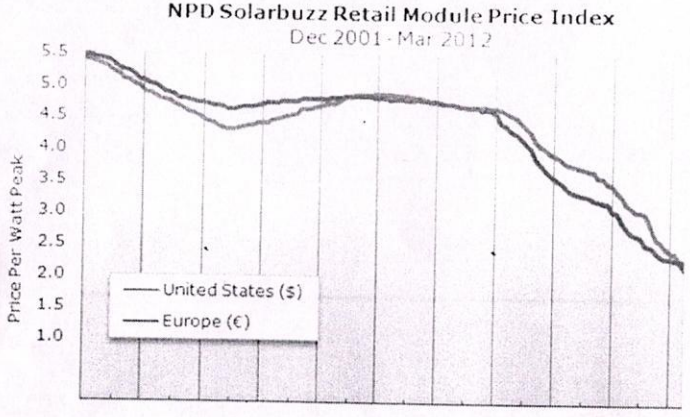
PV Cells as "Batteries"

- A single PV cell (junction) in the sun acts like a battery
  - characteristic voltage is 0.58 V
  - power delivered is current times voltage
  - current is determined by the rate of incoming solar photons
- Stack cells in series to get usefully high voltages
  - voltage ≠ power, but higher voltage means you can deliver power with less current, meaning smaller wiring, greater transmission efficiency
- A typical panel has 36 cells for about 21 V open-circuit (no current delivered)
  - but actually drops to ~16 V at max power
  - well suited to charging a nominal 12 V battery



How much does it cost?

- Solar PV is usually priced in dollars per peak Watt
  - or full-sun max capacity: how *fast* can it produce energy
  - panels cost $2.50 per Watt (and falling), installed cost $5/W
  - so a 3kW residential system is $15,000 to install
  - State rebates and federal tax incentives can reduce cost substantially
    - so 3kW system can be < $10,000 to install
- To get price per kWh, need to figure in exposure
  - rule of thumb: 4–6 hours per day full sun equiv: 3kW system produces ~15 kWh per day
- Mythbusting: the energy it takes to manufacture a PV panel is recouped in 3–4 years of sunlight
  - contrary to myth that…
  - they *never* achieve energy payback



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Presents this

CERTIFICATE OF PARTICIPATION

Ms. T. Sowmya - Roll No - 19941A0250

For her active and invaluable participation during the conduct of Certification Courses on "Introduction to Solar PV systems" held during 16th November to 04 th December , 2020, in Department of Electrical And Electronics Engineering.

Coordonator

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Department of Electrical and Electronics Engineering

Certification Course "Introduction to Solar PV systems"

Feedback Form

S.No	Name of the Student	Roll List	Is the Course content meet your expectation	Is the lecture sequence well planned	Is the level of course high	Is the course exposed you to the new knowledge and practices	Rate the Knowledge of the Speaker	Rate the value of Course in increasing your skills	Any Issues
1	BANDI SAI SREE	199Y1A0201	yes	Agree	yes	Strongly Agree	5	5	Nil
2	B.VENKATA CHARITHA	199Y1A0202	yes	Agree	yes	Agree	5	5	Provide PPT
3	B. CHANDRA SEKHAR NAIK	199Y1A0203	yes	Strongly Agree	yes	Agree	5	5	NIL
4	B.PARVATHA MMAGARI EKSHITHA	199Y1A0204	yes	Agree	yes	Agree	5	5	Nil
5	C.PRAMOD JOSHI	199Y1A0206	yes	Agree	yes	Agree	4	5	Nil
6	CHITTIBOINA HARI PRASAD	199Y1A0207	yes	Strongly Agree	yes	Agree	4	5	Give more examples
7	C. MOHAN KRISHNA	199Y1A0208	yes	Agree	yes	Agree	4	5	Nil
8	DERANGULA NAVEEN SAI	199Y1A0209	yes	Agree	yes	Agree	4	5	Nil
9	DODDA BOJE GOWD	199Y1A0210	yes	Strongly Agree	yes	Agree	4	5	Nil
10	D.REDDYVARI GAYATHRI	199Y1A0212	yes	Agree	yes	Agree	4	5	Nil
11	G. NITHYA CHANDANA	199Y1A0213	yes	Agree	yes	Agree	4	5	Nil
12	GORLA UMA MAHESWAR REDDY	199Y1A0214	yes	Strongly Agree	yes	Agree	4	5	Nil
13	G. ASHOK	199Y1A0215	yes	Agree	yes	Agree	4	5	Nil
14	GUDURU ANAND	199Y1A0216	yes	Agree	yes	Strongly Agree	4	5	Nil
15	GUNDLURU SAI PUNEETH KUMAR	199Y1A0217	yes	Strongly Agree	yes	Agree	4	5	Nil
16	JESTADI PRAVEENKUMAR	199Y1A0218	yes	Agree	yes	Agree	5	5	Nil

17	KADIRI NAVEEN	199Y1A0219	yes	Agree	yes	Strongly Agree	5	5	Nil
18	KALVAPALLI PAVITHRA	199Y1A0220	yes	Strongly Agree	yes	Agree	5	5	Nil
19	KAMMARI NITHISH KUMAR	199Y1A0221	yes	Agree	yes	Agree	5	5	Nil
20	KATHERAPALLE SAMARA SIMHA REDDY	199Y1A0222	yes	Agree	yes	Strongly Agree	5	5	Nil
21	K. NIKHAT SULTHANA	199Y1A0223	yes	Strongly Agree	yes	Agree	5	5	Nil
22	KATTA VENKATA SAI SREEDHAR	199Y1A0224	yes	Agree	yes	Agree	5	5	Nil
23	KONGANI VENKATA RAMANA	199Y1A0225	yes	Agree	yes	Strongly Agree	5	5	Nil
24	KORRAPATI SAKESH REDDY	199Y1A0226	yes	Strongly Agree	yes	Agree	5	5	Nil
25	MADAKABOYINA RAM MOHAN	199Y1A0227	yes	Agree	yes	Agree	5	5	Nil
26	MANDA KIRAN BABU	199Y1A0228	yes	Agree	yes	Strongly Agree	5	5	Nil
27	MIDDE GURU TEJA	199Y1A0231	yes	Strongly Agree	yes	Agree	5	5	Nil
28	MULA SUPRAJA	199Y1A0233	yes	Agree	yes	Agree	5	5	Nil
29	N. MANIKANTA REDDY	199Y1A0234	yes	Agree	yes	Strongly Agree	5	5	Nil
30	NAGURU SAI JYOTHI	199Y1A0235	yes	Strongly Agree	yes	Agree	5	5	Nil
31	NAMALA INDU	199Y1A0236	yes	Agree	yes	Agree	5	5	Nil
32	PAGALA BUJJI	199Y1A0237	yes	Agree	yes	Strongly Agree	5	5	Nil
33	PEDDAMAVIREDDYGARI CHINNA PEDDI REDDY	199Y1A0238	yes	Strongly Agree	yes	Agree	5	5	Nil
34	P.SUMANTH KUMAR	199Y1A0240	yes	Agree	yes	Agree	5	5	Nil
35	P. GIRIDHAR	199Y1A0242	yes	Agree	yes	Strongly Agree	5	5	Nil
36	SHAIK SAMEER BASHA	199Y1A0244	yes	Strongly Agree	yes	Agree	5	5	Nil
37	S.LOKENDRA REDDY	199Y1A0245	yes	Agree	yes	Agree	5	5	Nil
38	S.HARI KRISHNA REDDY	199Y1A0246	yes	Agree	yes	Strongly Agree	5	5	Nil
39	S.YESWANTH REDDY	199Y1A0247	yes	Strongly Agree	yes	Agree	5	5	Nil
40	SYED ASMA FARHEEN	199Y1A0248	yes	Agree	yes	Agree	5	5	Nil

41	SYED KHAMAR HUSSAIN	199Y1A0249	yes	Agree	yes	Strongly Agree	5	5	Nil
42	TADIGOTLA SOWMYA	199Y1A0250	yes	Strongly Agree	yes	Agree	5	5	Nil
43	THUMMALURI JYOTHI BHARGAVI	199Y1A0251	yes	Agree	yes	Agree	5	5	Nil
44	T. SETTY PRUDHULA	199Y1A0252	yes	Agree	yes	Strongly Agree	5	5	Nil
45	VALLURU DIVYA TEJA	199Y1A0253	yes	Strongly Agree	yes	Agree	5	5	Nil
46	V. KRANTI KUMAR REDDY	199Y1A0254	yes	Agree	yes	Agree	5	5	Nil
47	YAPARALA YESHASWINI	199Y1A0256	yes	Agree	yes	Strongly Agree	5	5	Nil
48	Y.CHANDRA KALA	199Y1A0257	yes	Strongly Agree	yes	Agree	5	5	Nil
49	B.Swathi	209Y5A0201	yes	Agree	yes	Agree	5	5	Nil
50	S.Shaikshavali	209Y5A0202	yes	Agree	yes	Strongly Agree	5	5	PPT required
51	K .Rakesh	209Y5A0204	yes	Strongly Agree	yes	Agree	5	5	Nil
52	S Sravana Sandhya	209Y5A0206	yes	Agree	yes	Agree	5	5	Nil

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