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**5 DAY WORKSHOP ON SOLAR PV PLANT DESIGN**

IEEE MVSR PES Student Chapter in collaboration with EESA has conducted a 5-day workshop on solar PV plant design for the electrical and electronics students of the third year from 3rd to 7th of October 2023. The main motto of this workshop is to give an overview of solar systems, PV system components selection, Rooftop PV plant design, solar plant visits, and training on PV systems.



**Session Details:**

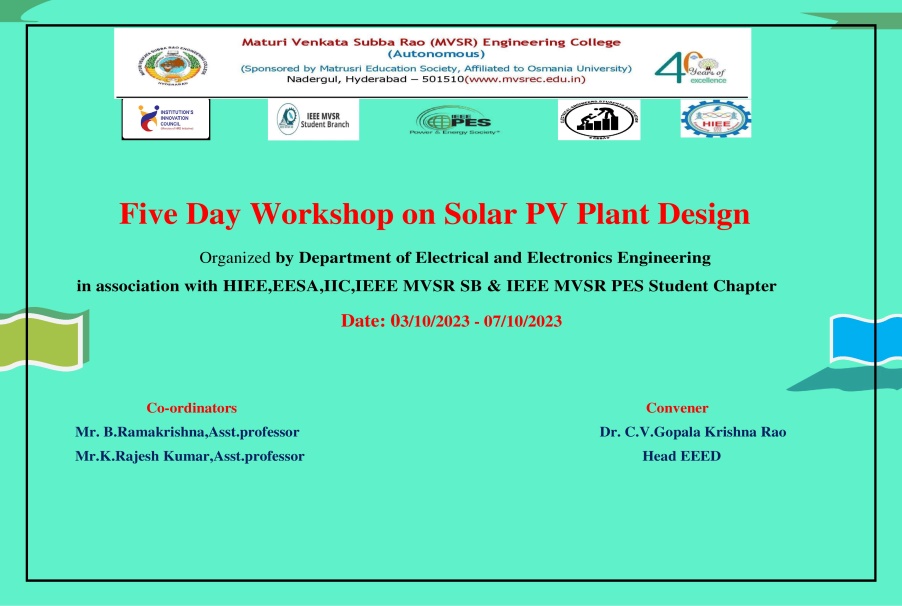
**Date: 3 to 7October, 2023.**

**Timings:** 09:30 am-4:15 pm.

**Number of Attendees: 92, IEEE: 13 and Non-IEEE: 79**

**Speaker of the Session:**

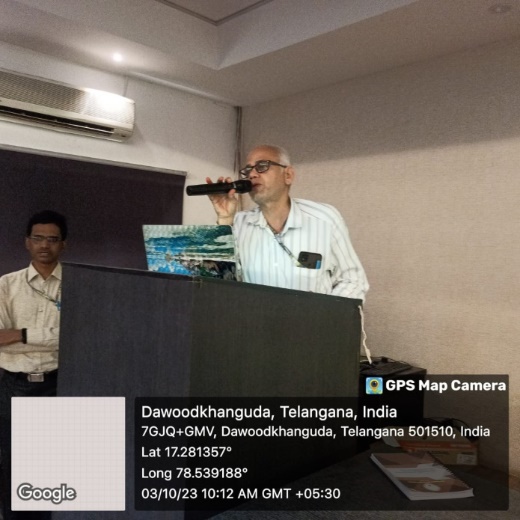
Mr. Madan Mohan, CEO, of HIEE, has 16+ years of experience in the design of Switch Gear Panels, Sub Stations, and Solar Applications.



**Poster of the five-day workshop on Solar PV Plant Design**

**1st day: 3rd October, 2023**

On 3rd October 2023, Mr. B. Rama Krishna, Asst commenced the session. Professor, EEE Department by welcoming Dr. C.V. Gopala Krishna Rao, Head-EEE Department, Mr. Madan Mohan HIEE, CEO, Dr. D. Hari Krishna, Student Branch Counsellor & Associate Professor, EEED, Mr. Y Laxmi Narasimha Rao IEEE MVSR PES Student Chapter Faculty Advisor and all the faculty and student participants. Later, Dr. C.V. Gopala Krishna Rao addressed the gathering, explained how renewable energy sources are important nowadays, and explained that one of the most important renewable energy sources is solar and the importance of Solar PV Plant Design.

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**Dr. C. V. Gopala Krishna Rao sir addressing the gathering on 1st day**

In continuation, Dr. D. Hari Krishna addressed the gathering about the importance of Solar PV Plant Design in today’s scenario and the advantages of IEEE PES membership. Later handed over the session to Mr. Madan Mohan, CEO, of HIEE. Mr. Mohan started his session with an overview of how the solar system is evolving in India, key market trends in utility-scale and Rooftop Segments, Rooftop Solar, How it works, Site analysis, and rooftop and utility solar readiness assessment. Later he gave students, some assessment questions to solve. He also explained the career opportunities in Solar PV Plant Design. The first-day session concluded with a recap of all the topics covered.

**2nd day: 4th October, 2023**

On the second day, Mr. Mohan started the session with the introduction of the components selection of the Photo Voltaic Cell. Later he gave a detailed explanation of the Technical overview of DC and AC principles of Solar PV Systems, different types of panels, inverters, and other balances of the system, components for both Off-Grid, On-Grid, and utility-scale, and evaluation of PV modules mounting structures. Later he gave students, some assessment questions to solve. A recap of all topics discussed this day marked the end of the second-day session.



**Speaker addressing the gathering on 4th October, 2023**

**3rd day: 5th October, 2023**

On the third day of the workshop, Mr. Mohan started the session with an introduction to Rooftop PV Plant Design which involves string selection, DCDB and ACDB design and selection, single-line diagram preparation, cable sizing, PV Power Evacuation, and Net Metering concept. He also gave some assessment questions on these topics to calculate strings etc. Later he asked students, to solve some assessment questions. The third-day session came to an end with a recap of all topics discussed on that day.

A group of people sitting in chairs in front of a screen

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**Speaker addressing the gathering on 5th October, 2023**

**4th day: 6th October, 2023**

On the fourth day of the workshop, there was a visit to the solar plant which is located on the rooftop of CSED, MVSREC. He advised the student to observe the solar plant and count the connected modules, determine the capacity of the plant, and how many inverters are required for this plant. Then he showed and explained about the inverter which is connected to the solar plant. He also explained in detail about the inverter, cable sizes connected to the inverter, inverter capacity, and many more technical aspects of the solar plant.

A group of people standing on a roof

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**Solar PV Plant visit on the rooftop of CSED, MVSREC.**

**5th day: 7th October, 2023**

On the fifth day of the workshop, the session started with the introduction of PV system software. He told the importance of PV system software for analysis of power extraction from solar plants, he also gave training on PV-system software which includes site selection, module orientation, system configuration, and energy generation report. He also gave some site information and asked the student to generate a report on those sites and asked how much energy had been generated.

A group of people sitting in chairs in a room

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**Speaker addressing the gathering on 7th October, 2023**

After the session, there was a valedictory function for this five-day workshop. The faculty and students gave positive feedback on this workshop. They said that they have learned the fundamentals and designing concepts of Solar PV Plant. This workshop was very useful and all the sessions were informative. Mr. B. Rama Krishna thanked the speaker for delivering very valuable information in the session. A vote of thanks by Mr. K. Chandra Teja, IEEE MVSR PES Student Chapter, Joint Secretary, marked the event's end.



**Group picture of participants along with the speaker**

**List of attendees:**

|  |  |  |  |
| --- | --- | --- | --- |
| **S.No** | **Roll No** | **Student Name** | **IEEE ID number** |
| 1 | 2451-21-734-001 | Mohammed Awez |  |
| 2 | 2451-21-734-002 | Kampa Koushik |  |
| 3 | 2451-21-734-003 | Mohammed Amer |  |
| 4 | 2451-21-734-007 | Kethavath Swamy |  |
| 6 | 2451-21-734-012 | Golla Vinod Kumar |  |
| 7 | 2451-21-734-019 | Dade Manusha |  |
| 8 | 2451-21-734-020 | Mohammed Asad |  |
| 9 | 2451-21-734-027 | Ramavath Ankitha | 98936794 |
| 10 | 2451-21-734-028 | Gavvala Prashanth |  |
| 11 | 2451-21-734-029 | Bangla Priyamvada |  |
| 12 | 2451-21-734-030 | Ulpara Bharath |  |
| 13 | 2451-21-734-032 | Perla Kavya |  |
| 14 | 2451-21-734-033 | Periketi Phanindra Kavi |  |
| 15 | 2451-21-734-034 | Navilpakam Sri Harsha |  |
| 16 | 2451-21-734-035 | Appanagari Susheshana |  |
| 17 | 2451-21-734-037 | Eaga Harish |  |
| 18 | 2451-21-734-303 | Yacharam Naveen |  |
| 19 | 2451-21-734-304 | Bijjala Preethi |  |
| 20 | 2451-21-734-305 | Racha Rajeshwari |  |
| 21 | 2451-21-734-307 | Kadaboina Suma Manmika |  |
| 22 | 2451-21-734-308 | Toorupati Shukraj |  |
| 23 | 2451-21-734-309 | Manikyam Jyothir Adithya |  |
| 24 | 2451-21-734-310 | Eruku Sai Pavan |  |
| 25 | 2451-21-734-311 | Y Yashvanth Kumar |  |
| 26 | 2451-21-734-313 | Sayyad Anwar |  |
| 27 | 2451-21-734-314 | Gavva Pavan Kumar Reddy |  |
| 28 | 2451-21-734-315 | Malthumkar Gayathri |  |
| 29 | 2451-21-734-316 | Alluri Laya |  |
| 30 | 2451-21-734-317 | Nagula Sanjeev Yadav |  |
| 31 | 2451-21-734-318 | Chikkalgi Sri Harsha Vardhan Reddy |  |
| 32 | 2451-21-734-319 | Gona Anvitha |  |
| 33 | 2451-21-734-320 | Mudigonda Durgeshwara Rao |  |
| 34 | 2451-21-734-321 | Govindbaksh Vijaykiran |  |
| 35 | 2451-21-734-322 | Ganji Narendra |  |
| 36 | 2451-21-734-327 | Hugge Ashwini |  |
| 37 | 2451-21-734-328 | Roushan Kumar Barnwal |  |
| 38 | 2451-21-734-329 | Bollam Naresh |  |
| 39 | 2451-21-734-330 | Kudikala Chandra Teja | 99479404 |
| 40 | 2451-21-734-038 | Dusari Sai Deekshith Goud |  |
| 41 | 2451-21-734-040 | Jinka Chaithanya | 98936758 |
| 42 | 2451-21-734-041 | Dyasani Advitha | 98934859 |
| 43 | 2451-21-734-042 | Ramavath Bharath |  |
| 44 | 2451-21-734-043 | Mohd Anas Ahmed |  |
| 45 | 2451-21-734-045 | Mohan Kumar |  |
| 46 | 2451-21-734-050 | Shaik Akram |  |
| 47 | 2451-21-734-052 | Paramkusam Gayathri | 98946853 |
| 48 | 2451-21-734-055 | Banavath Sree Vidya | 98934833 |
| 49 | 2451-21-734-056 | Kanugula Sravan Kumar |  |
| 50 | 2451-21-734-057 | Ragula Pradham |  |
| 51 | 2451-21-734-058 | Palla Laxmi Gayathri | 98946841 |
| 52 | 2451-21-734-059 | Anugu Poojitha | 98936913 |
| 53 | 2451-21-734-060 | Ajmeera Mounika |  |
| 54 | 2451-21-734-063 | Gajula Bhavana |  |
| 55 | 2451-21-734-064 | Vislavath Umesh |  |
| 56 | 2451-21-734-065 | Jatavath Tharun |  |
| 57 | 2451-21-734-066 | Sumaya Thabassum Vali | 98937346 |
| 58 | 2451-21-734-331 | Bakam Sravya |  |
| 59 | 2451-21-734-334 | Ella Sushma |  |
| 60 | 2451-21-734-336 | Jatavath Anil Kumar |  |
| 61 | 2451-21-734-337 | Gade Swetha |  |
| 62 | 2451-21-734-338 | Mallareddy Shiva Prasad |  |
| 63 | 2451-21-734-343 | Chinthakuntla Nandeeshwar Reddy |  |
| 64 | 2451-21-734-344 | P.Ravi Teja |  |
| 65 | 2451-21-734-347 | Shaik Sohail |  |
| 66 | 2451-21-734-356 | Banda Laxmi Narasimha |  |
| 67 | 2451-21-734-359 | Manemoni Laxmi Bhargavi |  |
| 68 | 2451-21-734-361 | Narayanadas Tarun Kumar |  |
| 69 | 2451-21-734-010 | Mohammad saqib ali |  |
| 70 | 2451-21-734-018 | Kotla srikanth |  |
| 71 | 2451-21-734-301 | Maddur mahendar | 99460864 |
| 72 | 2451-21-734-324 | Gundarpu sandeep |  |
| 73 | 2451-21-734-048 | Mudavath mallesh |  |
| 74 | 2451-21-734-360 | G.Sriram |  |
| 75 | EEE Faculty | Mr.B.Ramakrishna |  |
| 76 | EEE Faculty | Dr.D.Harikrishna | 90436180 |
| 77 | EEE Faculty | Mr.Y.L.Narsimha Rao | 96450801 |
| 78 | EEE Faculty& HOD | Dr.C.V.Gopala Krishna Rao |  |
| 79 | EEE Faculty | Mr.I.Narasimha swamy | 97981180 |
| 80 | EEE Faculty | Dr .D. Venumadhava Chary |  |
| 81 | EEE Faculty | Dr. P. V .V. Rama Rao |  |
| 82 | EEE Faculty | Dr. T. Chandra Shekar |  |
| 83 | EEE Faculty | Mr.P. V. V. Raghava Sharma |  |
| 84 | EEE Faculty | Mr. S. Shyam Mohan |  |
| 85 | EEE Faculty | Mr .G. Satyanarayana |  |
| 86 | EEE Faculty | Mr .N. Ravi |  |
| 87 | EEE Faculty | Mr .P. B. Guru Prasanna |  |
| 88 | EEE Faculty | Mr .V.Raghu Krishna |  |
| 89 | EEE Faculty | Mr .L. Harshavardhan |  |
| 90 | EEE Faculty | Mrs. D. Saiprasanna |  |
| 91 | EEE Faculty | Mr.V. Ashok |  |
| 92 | EEE Faculty | Mr.K. Rajesh Kumar |  |

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