



S.O.S. IN ELECTRONICS & PHOTONICS
PT. RAVISHANKAR SHUKLA UNIVERSITY RAIPUR (C.G.)



PRESS RELEASE

Raipur, Date 27th April 2023

**Institute of Renewable Energy Technology & Management holds huge potential,
Post Graduation Programme in Renewable Energy will induct from 2024-25:
Prof. Sachchidanand Shukla**

**3 Days Workshop on Advancements in Solar Photovoltaic Technologies at
Institute of RETM Inaugurated**

Rising concerns about climate change, the health effects of air pollution, energy security and energy access, along with volatile oil prices in recent decades, have led to the need to produce and use alternative, low-carbon technology options such as renewables. The evolution of the solar PV industry so far has been remarkable, with several milestones achieved in recent years in terms of installations (including off-grid), cost reductions and technological advancements, as well as establishment of key solar energy associations, this lead to Solar PV to be one of the pioneering renewable technologies over the decades. The IEA estimates that the transition towards net-zero emissions will lead to an overall increase in energy sector jobs: while about 5 million jobs in fossil fuel production could be lost by 2030, an estimated 14 million new jobs would be created in clean energy, resulting in a net gain of 9 million jobs and hence huge trained workforce is required in coming years to serve the purpose of renewable growth.

In context Institute of Renewable Energy Technology & Management and S.O.S. in Electronics & Photonics in association with Public Outreach Centre is organizing 3 Days Workshop on Advancements in Solar Photovoltaic Technologies from 27th April to 29th April 2023. The 3 Days Workshop on Advancements in Solar Photovoltaic Technologies commenced at 11:00 AM of 27th April in the presence of Chief Guest Prof. Sachidanand Shukla, Hon'ble Vice Chancellor, Energy Experts & Speakers of the workshop Mr. Amitesh Sharma and Mr. Rajib Das, Director, Greenfinity Powertech Pvt. Ltd. & Prof. Kavita Thakur, Coordinator, Institute of RETM & Head, S.O.S. in Electronics & Photonics. The session started with Lamp lightning ceremony followed by the welcoming of the guest & technical session.

Addressing the participants, Chief Guest of the workshop Prof. Sachidanand Shukla, Hon'ble Vice Chancellor, said, today, the world is at the crossroads of a contradictory energy scenario wherein, on the one hand, energy access has to be provided to billions while, on the other hand, increasing demand and usage of energy is causing catastrophic climate change". He further added that, the evolution of the solar



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PV industry so far has been remarkable, with several milestones achieved in recent years in terms of installations (including off-grid), cost reductions and technological advancements. Looking at these statistics it is obvious that solar power will clearly continue to be an essential renewable option in the coming decades which in turn generate millions of jobs all across the nation. Chhattisgarh being rich in solar radiation as it receives more than 300 clear sunny days helps in rapid deployment of PV Project as a result it gives better opportunity to the students studying here in department.

Hon'ble Vice-Chancellor during his address promised the students that, soon they will be having in-house higher education facility in Renewable Energy as he is focussed on inducting Post Graduation program in Renewable Energy from 2024-25. He added that, department is moving in positive direction and holding huge potential, Congratulating the department he said, "Organizing such workshops will definitely reduce the gap between Industry and Institute".

Dr. Kavita Thakur, Coordinator, Institute of RETM & Head, S.O.S. in Electronics & Photonics informed the participants that, the total installed capacity of solar PV now represents the second-largest renewable electricity source after wind. Solar PV dominated the total renewable and power capacity additions, adding twice as much capacity as wind and more than all fossil fuels and nuclear together.

Mr. Amitesh Sharma, Director, Greenfinity Powertech Pvt. Ltd., Speaker of the workshop said, "Reducing energy-related CO₂ emissions is at the heart of the energy transformation. Rapidly shifting the world away from the consumption of fossil fuels that cause climate change and towards cleaner renewable forms of energy is critical if the world is to reach the climate goals agreed in Paris. Climate change has become a major concern of this century".

Supplementing the thoughts Mr. Rajib Das, Director, Greenfinity Powertech Pvt. Ltd., said The Paris Agreement establishes a mechanism to limit global temperature rise to "well below 2°C", and ideally to 1.5°C, compared to pre-industrial levels. The profound transformation of the global energy landscape is essential to realize the agreement's climate targets. Such a transformation is possible with the rapid deployment of low-carbon technologies in place of conventional fossil fuel generation and uses. The transition to increasingly electrified forms of transport and heat, when combined with increases in renewable power generation, would deliver around 60% of the energy-related CO₂ emission reductions needed by 2050. At the same time the global weighted average cost of electricity from all commercially available renewable power generation technologies continued to fall which is a positive remark for renewable growth.



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Inaugural Session was followed by Technical Session which has covered numerous essential topics like Basic electrical concepts involved in Solar, Sun movement and trajectory, Solar radiation scenario in India, Components of power plants & its Selection, Interesting facts, Myths, Inverters and its selection Parameters, Site Survey Analysis & Parameters and many more.

Nearly 70 students from various teaching departments of university have participated in the workshop. The workshop is kept free of cost for everyone. For the Inaugural ceremony of Mr. G S Rathore, Ms. Ankita, Mr. Ankur, Ms. Kusum, Ms. Preeti from Institute of RETM, Mr. Madhu, Mr. Anil, Mr. Mohnish, Ms. Shalini, Ms. Gunvati from S.O.S. in Electronics & Photonics, Mr. Domendra, Dr. Shobhna, Mrs. Annu Agrawal, Mr. Sudhir, Mr. Lokesh from S.O.S. in Environmental Sciences and other staffs were present.

DR. KAVITA THAKUR

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PRESS RELEASE

Raipur, Date 28th April 2023

The Workshop is a Golden Opportunity for students - Prof. Kallol Ghosh

Second day of 3 Days Workshop on Advancements in Solar Photovoltaic Technologies at Institute of RETM

The second day of the three days' workshop organized by Institute of Renewable Energy Technology & Management and S.O.S. in Electronics & Photonics in association with Public Outreach Centre on Advancements in Solar Photovoltaic Technologies witnesses enthusiastic participation from students.

The morning session began with the welcome note of Dr. Kavita Thakur, Coordinator, Institute of RETM & Head, S.O.S. in Electronics & Photonics informed the participants that, the time spent by the students in the workshop will help the students in the near future. The practical knowledge of the Solar PV Installation will help the students to get better jobs and internship opportunities.

Mr. Rajib Das, Director, Greenfinity Powertech Pvt. Ltd., Speaker of the workshop continued the session by briefing the students about the importance of the technical abilities in the designing and installation of solar PV Off grid and On Grid System. Followed by the case study of different on grid power plant, designing of the on-grid system, load calculations and system sizing.

The afternoon session was inaugurated by Prof. Kallol Ghosh, Coordinator, Public Outreach Center and Dr. Kavita Thakur, Coordinator, Institute of RETM & Head, S.O.S. in Electronics & Photonics. Prof Kallol Ghosh in his address appreciated the program and said that this is a golden opportunity for the students in the view of India's G20 presidency. He informed students about the S20, Science 20 Inception meeting going to take place in the year 2023. The theme of the S 20 focuses on Sustainable development and the learning from this workshop apparently will make students understand the goals of S 20.

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On April 29, 2023, a group of students embarked on a one-day visit to a 50 kW on-grid solar power plant located at the Vigour and Verve Girls Hostel in Raipur. The power plant was installed and maintained by Greenfinity, a renowned organization in the field of renewable energy. During the visit, the representatives from Greenfinity provided detailed explanations about the solar panels' specifications.

The solar panels at the power plant were of the mono perc (445 W) type. Each panel had a power output of 445 watts. The total number of strings in the power plant was six, with 19 panels connected in each string. This configuration resulted in a total power production capacity of 38 kW.

Accompanying the students on this educational excursion were Madhu Allalla, Mohnish Kumar Sahu, K Anil Kumar, who served as assistant professors and guest faculty members from the S.O.S in Electronics and Photonics department at PRSU, Raipur. These knowledgeable individuals provided additional insights and guidance to the students throughout the visit, enhancing their understanding of solar power generation and its applications.

Overall, the visit to the solar power plant offered the students a valuable opportunity to witness firsthand the practical implementation of solar energy technologies. It allowed them to grasp the significance of sustainable energy sources and their role in mitigating environmental challenges.

