



Two-Day Workshop on Bright Futures: Empowering Educators Through Hands-On LED Repair and Energy Conservation

Background

Energy conservation and energy efficiency are crucial priorities for India as the country moves towards achieving sustainable development, environmental protection, and a cleaner energy future. Efficient use of electricity, particularly through improved lighting technologies and responsible management of electrical and electronic devices, can play an important role in reducing energy consumption and environmental degradation. Teachers play a significant role in shaping the knowledge, attitudes and behaviour of young learners. By equipping school teachers/eco-club coordinators with practical knowledge and skills related to energy conservation, efficient lighting technologies, the repair and reuse of LED and tube lights, they can further disseminate this knowledge among students and within their respective school communities.

Recognizing this need, the Eco-Club and Internal Quality Assurance Cell (IQAC), Akal University, propose to organise a Two-Day Training Programme on “**Bright Futures: Empowering Educators Through Hands-On LED Repair and Energy Conservation**” under EEP-2025-26.

Objectives of the Training Programme

1. To create awareness among school teachers about energy conservation and the importance of energy-efficient lighting technologies.
2. To provide practical knowledge and hands-on exposure regarding the basic functioning, assembling, disassembling, and repair of LED and tube lights.
3. To sensitise teachers/eco club coordinators about the importance of repair, reuse, and extending the useful life of electrical and lighting devices.
4. To empower school teachers as knowledge multipliers who can promote energy conservation awareness and sustainable practices among students in their respective schools.
5. To contribute towards the Government of India’s initiatives relating to energy efficiency, environmental sustainability, and Sustainable Development Goal 7 (SDG-7): Affordable and Clean Energy.



Methodology

The training programme will provide practical exposure related to energy-efficient lighting technologies, particularly LED and tube lights. Participants will learn about the types and functioning of energy-saving lighting devices, their basic assembling and disassembling, identification of common faults, repair and reuse techniques, safe handling practices, and appropriate management of electrical and electronic waste. Through this initiative, the programme aims to create a multiplier effect by empowering teachers to further disseminate knowledge and awareness among their students, with practical exposure and skills related to energy conservation and efficient lighting technologies. Day wise details of training programme are as under.

10.11.2026 (Day-1)

The first day of the programme will be dedicated to approximately 35 school teachers/eco club coordinators from nearby govt and private schools. The programme will begin with an inaugural session and a Keynote Address by Dr. Udhey Partap Singh from EHS Alliance, Gurugram. The keynote session will focus on the importance of energy conservation, sustainable development, efficient energy use, and the role of teachers and educational institutions in developing environmentally responsible future citizens. The practical and technical sessions will be conducted by the designated trainer/resource person, who will introduce participants to:

- Basic components and functioning of LED and tube light systems.
- Identification of common faults in lighting devices.
- Basic assembling and disassembling techniques.
- Repair and reuse possibilities.
- Safe handling of electrical devices.
- Different types of LED and energy-saving tube lights.
- Energy-saving practices that can be promoted in schools.
- Proper management and disposal of electrical and electronic waste.

The sessions will combine demonstrations, practical exercises, interactive discussions, and question-and-answer sessions.

Teachers will also be encouraged to explore ways of integrating energy conservation awareness into school activities, Eco-Club initiatives, classroom discussions, and community outreach programmes. By training teachers, the programme seeks to create a sustainable multiplier effect, whereby the knowledge gained can subsequently be shared with a larger number of students.



11.11.2026 (Day-2)

Similarly, second day will also be dedicated to new group of 35 school teachers/Eco Club Coordinators. The sessions and procedure of the workshop will be same as the first day of the workshop.

The training kits including Soldering Stations (60W Adjustable) & Digital Multi-meter etc., will be given to the participants for future training to the students at their respective schools.

Resource Persons

Keynote Speaker, Dr. Udhey Partap Singh, EHS Alliance, will deliver the keynote address and provide insights into the importance of energy conservation, sustainability, and the role of educational institutions and teachers in promoting energy-efficient practices.

Technical Trainer/Resource Person

The practical sessions on LED and Tube Light Repair Training will be conducted by the Two industry experts along with one Technicians from the Zoro Stars Led Lights, Ambala.

The trainer will provide practical demonstrations and hands-on guidance on:

- Energy-efficient lighting solutions.
- Components and functioning of LED and tube lights.
- Basic fault identification and repair techniques.
- Assembling and disassembling of lighting devices.
- Repair and reuse technologies.
- Safe handling practices.

Expected Outcomes

By the end of the two-day training programme:

- Approximately 70 school teachers/Eco-Club Coordinators will gain enhanced knowledge and practical exposure related to energy conservation and energy-efficient lighting technologies.
- Teachers will be better equipped to promote awareness regarding energy conservation and sustainable energy practices among students in their respective schools.



- Participants will develop an understanding of the importance of energy efficiency and responsible electricity consumption.
- Teachers will gain awareness regarding the possibilities of repairing and reusing lighting devices, thereby helping reduce unnecessary electrical and electronic waste.
- School teachers will act as knowledge multipliers, enabling the benefits of the training programme to reach a larger number of students.
- Participating teachers will be motivated to act as “Energy Ambassadors” and spread awareness among their peers, families, and communities.
- The programme will strengthen the role of schools in promoting energy conservation, environmental sustainability, and responsible consumption practices.
- The initiative will contribute towards India's commitment to sustainable development, particularly SDG-7: Affordable and Clean Energy, while also supporting broader environmental sustainability objectives.

Organized by: Eco Club & Department of Physics, Akal University, Talwandi Sabo

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