SUSTAINABLE DEVELOPMENT GOAL (SDG) 7

AFFORDABLE AND CLEAN ENERGY

ANURAG UNIVERSITY

INDEX

SDG 7: AFFORDABLE AND CLEAN ENERGY REPORT 2024

1. **Policy in place for ensuring all renovations or new builds follow energy efficiency standards**

   Anurag University has a formal Energy Policy mandating that all new buildings and major renovations comply with nationally recognised green building and energy efficiency standards. The policy requires passive solar architecture, natural daylighting, natural ventilation, high-insulation materials, low-emissivity windows, reflective roofing, and rooftop solar readiness. Renovated facilities must adopt LED lighting, energy-efficient equipment, and smart sensors. The University Energy Management Committee (UEMC) oversees policy implementation and ensures all construction projects meet the required standards.

   Link: https://iqac.anurag.edu.in/wp-content/uploads/2025/12/Energy-Policy-of-AU.pdf

2. **Plans to upgrade existing buildings to higher energy efficiency**

   Anurag University has an approved plan to progressively enhance the efficiency of existing buildings. Planned upgrades include campus-wide replacement of CFL and tube lights with LEDs, installation of smart sensors and automatic controls, retrofitting HVAC systems with 5-star rated models, improving insulation and ventilation, and conducting preventive maintenance of all electrical infrastructure. These actions are part of the Energy Sustainability Strategy and are supported by recommendations from the 2024 UEMC Energy Review, which identifies specific upgrade needs.

3. **Process for carbon management and reducing carbon dioxide emissions**

   Anurag University has a defined process for carbon management coordinated by the University Energy Management Committee. This includes annual energy reviews; monthly tracking of electricity, diesel, and petrol usage; and assessment of solar power

generation. The process identifies primary emission sources such as campus transport and diesel generators. Emission reduction measures include the transition to electric vehicles (EVs), promotion of cycling and shuttle services, expansion of rooftop solar systems, and replacement of inefficient electrical equipment. The University tracks indicators such as Energy Use Intensity (EUI), renewable energy contribution, and reductions in fossil fuel use. The Energy Policy includes long-term commitments to carbon neutrality by 2040 and full renewable electricity transition.

4. Have an energy efficiency plan in place to reduce overall energy consumption

The University has an established Energy Sustainability Strategy and Energy Policy, which together form a comprehensive energy efficiency plan. The plan includes baseline assessments, annual target setting, LED retrofitting, efficient HVAC upgrades, smart metering, passive design adoption, behavioural awareness programmes, and increased solar installations.
The University aims to reduce energy consumption intensity by 30% within 10 years, supported by regular monitoring and campus-wide awareness initiatives.

5. Undergo energy reviews to identify areas where energy waste is highest

The University conducts formal energy reviews through the UEMC. The 2024 Energy Review Report establishes a baseline by analysing electricity bills, diesel/petrol records, and solar generation data. Physical inspections and facility interviews identify inefficiencies such as high energy usage in HVAC systems, laboratories, and transport.
The University follows a system of monthly tracking, half-yearly reviews, and a published annual energy report to continuously identify and address energy waste.

6. **Policy on divesting investments from carbon-intensive energy industries notably coal and oil**

As a higher education institution in India, Anurag University does not maintain investment portfolios in fossil-fuel industries; hence, no divestment policy is required. However, the University's Energy Policy and long-term goals functionally align with divestment principles by prioritizing renewable and low-carbon energy. The University has no investments in coal or oil sectors and has committed to:

- Transitioning to 100% renewable electricity by 2040
- Expanding rooftop solar capacity and hybrid systems
- Reducing fossil fuel usage through EV adoption and sustainable mobility

These actions demonstrate institutional direction consistent with divestment from carbon-intensive energy sources.

7. **Energy use density**
    - Energy usage per sqm: 0.06259 GJ per sqm
    - Total Energy Used: 8722.33 GJ
    - University floor space (sqm): 139355

8. **Provide programmes for the local community to learn about the importance of energy efficiency and clean energy**

Anurag University, through its Department of Electrical & Electronics Engineering and the IUCEE Student Chapter, conducted impactful community outreach programmes to promote awareness on energy efficiency and renewable energy in Venkatapur Village, Ghatkesar. These initiatives were organised in collaboration with the National Service Scheme (Unit III) and Good Universe, a Hyderabad-based NGO working on climate action.

On July 16, 2024, the Department of EEE and NSS Unit III organised an outreach session on "Solar Energy and its Policies in India" at the Zilla Parishad School in Venkatapur. Around 80 participants, including students, teachers, villagers, and NSS volunteers, attended. Faculty experts conducted interactive sessions explaining the basics of solar photovoltaic technology, its environmental benefits, and the economic advantages of adopting solar power in rural households. Participants were introduced to major national policies such as the Solar Rooftop Scheme and PM-KUSUM. Demonstrations and live examples helped the community understand installation procedures, maintenance practices, and the role of solar energy in reducing electricity costs and carbon emissions.

A second major outreach was held on December 2, 2024, led by the IUCEE Student Chapter (AUISC) in collaboration with Good Universe. This programme focused on the importance of renewable energy and the harmful impacts of fossil fuel dependence. Through discussions and visual presentations, villagers learned how coal, petrol, and diesel use contribute to air pollution, greenhouse gas emissions, and long-term climate change. The team highlighted the advantages of clean energy sources such as solar, wind, and biomass, particularly their cost-effectiveness and suitability for rural settings.

Both outreach events succeeded in raising community awareness, dispelling myths about renewable technologies, and encouraging sustainable energy practices. The programmes strengthened Anurag University's ongoing commitment to community development, climate education, and promotion of clean energy solutions.

9. Provide direct services to local industry aimed at improving energy efficiency and clean energy (energy efficiency assessments, workshops, research renewable energy options)

The University actively collaborates with organisations in the local energy sector to enhance experiential learning, industry exposure, and technical competency among students, while also

supporting the industry through workforce development, applied research, and access to emerging talent. These engagements create a mutually beneficial ecosystem—students gain practical skills aligned with industry needs, and companies benefit from fresh perspectives, collaborative problem-solving, and opportunities to train and identify future professionals.

As part of these efforts, the University organised a Two-Day National Level Workshop on "Next Generation Electrical Engineering Using Hardware in Loop–Real Time Simulation" in collaboration with Typhoon HIL–Quarbz Info Systems on 28th and 29th February 2024. The program exposed participants to advanced real-time simulation tools used extensively in the power and energy industry, especially in renewable integration and smart grid systems.

Another significant initiative was the Two-Day Workshop on "Industry 4.0 – Internet of Things" held on 14–15 February and 16–17 February 2024. This workshop focused on digital transformation, automation, and IoT applications in the energy and industrial sectors.

To strengthen industry–academia dialogue, the University conducted a Guest Talk on "Gas Insulated Substations" on 13th March 2024, offering insights into modern substation technologies and operational challenges in power transmission networks.

Students also went on an Industrial Visit to Power Grid Corporation of India Limited (PGCIL), Hyderabad, on 6th January 2024, gaining exposure to large-scale power transmission infrastructure and grid management operations.

In July 2024, the University further expanded its industry-linked learning initiatives. On 12th July 2024, an Expert Talk on "Electrical Vehicle Technology" was organised at EV Retron Energies India Pvt. Ltd., Hyderabad, where 101 participants explored advancements in EV design, charging systems, and the evolving clean mobility ecosystem. Additionally, on 6th July 2024, 121 students visited the 6.6 MWP Solar Power Plant at Infosys, Pocharam, where they learned about solar plant operations,

energy generation processes, and on-ground renewable energy management.

10. Inform and support governments in clean energy and energy-efficient technology policy development

The Department of Electrical & Electronics Engineering, in partnership with the National Service Scheme (Unit III), organised an outreach programme on "Solar Energy and its Policies in India" on July 16th, 2024 at Venkatapur Village, Ghatkesar. The event, held in a government school, aimed to create awareness among students, government teachers, and rural communities about the significance of solar energy, its advantages, and the various government initiatives that support its adoption. A total of 80 participants attended the programme, including villagers, students, and NSS volunteers.

11. Provide assistance for start-ups that foster and support a low-carbon economy or technology

Anurag University provides a comprehensive and structured support system for nurturing innovation and developing start-ups among students, faculty, staff, and alumni. The University aims to build a strong entrepreneurial ecosystem through the Anurag University Innovation Centre (AUIC) coordinates all innovation-related activities, offering pre-incubation and incubation facilities.

The University provides start-ups access to fully equipped workspaces, prototyping facilities, mentorship support, and business development assistance. Students and faculty are encouraged to convert innovative ideas into viable business models through guidance in technology development, design thinking, financial planning, marketing, and legal matters. Start-up teams are permitted to use university facilities, seek flexible academic options, and even replace academic projects with entrepreneurial work. Students can also earn credits and register their company using the university address, with approval.

In 2024, support was offered to publishing patents for the following two low-carbon technologies. Support is being offered to get the patent granted.

Low-Carbon / Green Technology–Related Patents

1. Solar Water Pumping System for Sustainable Water Management

- Patent Application No.: 202441074110
- Title: *Solar water pumping system for sustainable water management*
- Inventors / Contributors:
    - Mr. K. Srinivasa Rao
    - Dr. T. Anil Kumar
    - Mr. Gugulothu Srikanth
    - Mr. Jatavath Nagaraju
    - Ms. Karupothula Anusha
- Assignee: Anurag University
- Relevance:
    - Uses solar renewable energy
    - Contributes to low-carbon rural/agricultural infrastructure
    - Reduces dependency on fossil-fuel-driven pumps

2. Graphene-Based Carbon Nanotube Composite for Ultra-Flexible High-Performance Displays

- Patent Application No.: 202441023969
- Title: *Graphene-based carbon nanotube composite for ultra-flexible high-performance displays*
- Inventors / Contributors:
    - Mr. E. Sadanandam
    - Dr. CH S. Naga Prasad
    - Dr. Kavuluri Pushpalatha
    - Capt. Dr. Veeraiah Adamilli
    - Dr. D. Lakshmi
- Assignee: Anurag University
- Relevance:

- Not a low-carbon technology by application, but includes carbon-based advanced materials with potential for energy-efficient devices.

12. Total energy used from low-carbon sources

- Total Energy Used: 8722.33 GJ
- Total Energy Used from low-carbon sources: 0.36 GJ

Energy Policy

February 2024

ANURAG UNIVERSITY

Venkatapur, Ghatkesar, Medchal–Malkajgiri district,
Hyderabad, Telangana, India. 500 088

Energy Policy of AU

1. Introduction

This Energy Policy outlines the vision, commitment, and operational guidelines of Anurag University to reduce energy consumption, enhance energy efficiency, and integrate renewable energy sources in campus operations.

2. Vision and Objectives

- Achieve carbon neutrality by 2040.
- Transition to 100% renewable energy for campus electricity needs by 2040.
- Reduce energy consumption intensity by 30% over the next 10 years.
- Foster research, innovation, and education in clean energy technologies.

3. Scope

This policy applies to all departments, laboratories, offices, hostels, buildings, and campuses under the university, including temporary structures, and outsourced services.

4. Governance and Responsibility

- Establish a University Energy Management Committee (UEMC).
- The UEMC will include members from faculty members, expert, administration, and students.
- The UEMC shall monitor, review, and report on energy targets and compliance annually.

5. Energy Efficiency and Conservation Strategies

- Conduct periodic energy reviews.
- Adopt LED lighting and energy-efficient appliances.
- Use smart sensors, timers, and automation for lighting, HVAC, and lab equipment.
- Promote passive solar architecture and natural ventilation in new buildings.

6. Renewable Energy Integration

- Install rooftop solar PV systems across all major buildings.
- Explore solar thermal heating in hostels and kitchens.
- Encourage use of biogas and wind hybrid systems where feasible.
- Feed surplus solar power into the grid under state net metering policy.

7. Awareness, Training, and Capacity Building

- Conduct energy literacy campaigns for staff, students, and local community.
- Integrate energy topics into curriculum, research, and thesis.
- Organize workshops, competitions, and field projects on energy management.

8. Procurement and Operations

- Adopt green procurement standards for electrical and electronic goods.
- Prioritize vendors who offer energy-efficient, eco-labelled products.
- Specify energy efficiency benchmarks in infrastructure tenders and projects.

9. Infrastructure and Construction

- All new constructions and major renovations of existing structures must comply with nationally recognized green building codes.
- Incorporate passive solar design, natural daylighting, and ventilation strategies during the design phase to reduce the need for artificial lighting and mechanical cooling.
- Use energy-efficient, high-insulation materials, low-emissivity windows, and reflective roofing to reduce thermal gain and loss.
- Ensure new constructions are equipped with rooftop solar readiness and rainwater harvesting infrastructure as per state building regulations.

9. Monitoring, Evaluation, and Reporting

- Set annual energy use benchmarks per building/unit.
- Use energy dashboards and data loggers for real-time monitoring.
- Publish annual Energy and Sustainability Reports.

10. Review

- Non-compliance shall be reviewed by UEMC and corrective actions initiated.
- Incentives may be offered for exceptional energy-saving contributions.
- Semester-wise review and yearly audit

ANURAG UNIVERSITY

(Established under the Act No. 13 of 2020 as per the Telangana State Private Universities Act, 2018. Sponsored by Gayathri Educational & Cultural Trust)

No AU / Admin / UEMC / 2024 /451 **Date: 23 February, 2024**

Subject: Constitution of University Energy Management Committee (UEMC)

Based on the resolution 6a of the 16th meeting of the Board of Management (BoM) held on 17th February, 2025, the Vice-Chancellor constitutes the University Energy Management Committee (UEMC), with immediate effect. The Committee consists of the following members:

S. No.	Name & Details	Designation
1	Shri. Md Yaseen, Asst Prof. Dept. of EEE	Chairperson
2	Shri. Ch Srinivasa Rao, Asst Prof. Dept. of EEE	Member
3	Shri. T. Dinesh, Asst Prof. Dept. of EEE	Member
4	Mr. Narayana, Energy Division	Member
5	Mr. M. Karunakar Reddy, Transport In-Charge	Member
6	Dr. M. Venkata Ramana, Director, IQAC	Convenor

The Committee may take action as may be necessary for the implementation of the Energy Policy.

(Dr. A. Padmanabha Rao)
Deputy Registrar

REGISTRAR
ANURAG UNIVERSITY
Venkatapur (V), Ghatkesar (M),
Medchal (Dist).

To

1. The committee members
2. The Deans / Directors/ Heads
3. AO

ANURAG UNIVERSITY
(Established under the Act No. 13 of 2020 as per the Telangana State Private Universities Act, 2018. Sponsored by Gayathri Educational & Cultural Trust)

26 May 2024

Minutes of the Meeting of the University Energy Management Committee (UEMC)

Venue: G-Block, 4th floor
Time: 10.00 A.M

Agenda

1. To discuss the purpose and objectives of the Energy Review Committee.
2. To review the existing energy consumption pattern across the campus.
3. To propose measures for energy conservation and renewable energy adoption.
4. To plan awareness programs and monitoring mechanisms.

Proceedings

1. **Welcome Address:**

The Convener, Dr. M. Venkata Ramana, welcomed all members and briefed them about the significance of energy management and sustainability in alignment with the university's green initiatives.

2. **Committee Objectives:**

The Chairperson, Shri. Md. Yaseen, explained that the committee's main objectives are to assess current energy usage, identify areas of energy wastage, and recommend strategies for conservation and efficiency improvements.

3. **Energy Baseline Review:**

The committee reviewed the available electricity bills and discussed the need to establish a baseline energy consumption report.

4. **Energy Efficiency and Renewable Measures:**

- The committee decided to review the energy consumption in the university for further action

5. **Next Steps:**

- The Energy Division will prepare a baseline energy report by the next meeting.

- The Energy Division will do a review after for period ending August
- The next committee meeting will be scheduled in September 2024.

Members Present

S. No.	Name & Details	Designation
1	Shri. Md. Yaseen, Assistant Professor, Dept. of EEE	Chairperson
2	Shri. Ch. Srinivasa Rao, Assistant Professor, Dept. of EEE	Member
3	Shri. T. Dinesh, Assistant Professor, Dept. of EEE	Member
4	Mr. Narayana, Energy Division	Member
5	Mr. M. Karunakar Reddy, Transport In-Charge	Member
6	Dr. M. Venkata Ramana, Director, IQAC	Convener

Dr. M. Venkata Ramana
Director, IQAC & Convener

Copy to:

- The Hon'ble Vice Chancellor
- The Deans
- All Committee Members

ANURAG UNIVERSITY

(Established under the Act No. 13 of 2020 as per the Telangana State Private Universities Act, 2018. Sponsored by Gayathri Educational & Cultural Trust)

20 September 2024

Minutes of the Meeting of the University Energy Management Committee (UEMC)

Venue: G-Block, 4th floor
Time: 10.00 A.M

Agenda

1. To discuss the review done by the committee
2. To propose measures for energy conservation and renewable energy adoption.
3. To plan awareness programs and monitoring mechanisms.

Proceedings

1. **Welcome Address:**

The Convener, Dr. M. Venkata Ramana, welcomed all the members and provided an overview of the importance of energy management and sustainability, emphasizing their alignment with the university's green initiatives.

2. **Committee Objectives:**

The Chairperson, Shri. Md. Yaseen, outlined that the committee's primary objectives are to evaluate current energy consumption, identify instances of energy wastage, and propose strategies to enhance conservation and efficiency.

3. **Energy Baseline Review:**

The committee reviewed the available electricity bills and conducted review of the energy consumed across the university by all the academic and non-academic units during the 1st – 15th of September, 2024. The review report was discussed.

4. **Energy Efficiency and Renewable Measures:**

   - The committee recommended replacing existing CFLs and tube lights with LEDs in all departments and hostels.
   - Installation of solar rooftop panels in remaining blocks was suggested after feasibility analysis by the Energy Division.

- Members proposed introducing sub-meters in high-consumption buildings to monitor usage patterns.

5. **Awareness and Engagement:**

   Shri. T. Dinesh suggested organizing Energy Conservation Week and student-led campaigns to promote responsible energy use. It was agreed that such events would be conducted under the guidance of the University Energy Management Committee (UEMC).

6. **Transport Energy Reduction:**

   The committee discussed the significant role of transportation in overall energy use. It was proposed to:

   - Encourage carpooling, shuttle buses, and electric vehicle usage for staff and students.
   - Gradually reduce dependency on petrol and diesel vehicles within the university campus.
   - Explore the installation of EV charging stations as a long-term sustainability measure.

7. **Next Steps:**

   - The Energy Division will prepare a baseline energy report by the next meeting.
   - The Energy Division will do a review after for period ending August
   - The next committee meeting will be scheduled in September 2024.

Resolutions Passed

1. To initiate a comprehensive energy review across the university campus for the year 2024.
2. To implement a phase-wise LED replacement plan.
3. To explore additional solar power capacity expansion.
4. To develop and circulate an Energy Conservation Awareness Plan among all departments.

Conclusion

The meeting concluded with a vote of thanks by the convener, appreciating the active participation of all members and their commitment towards making Anurag University a model for energy efficiency and sustainability.

Members Present

S. No.	Name & Details	Designation
1	Shri. Md. Yaseen, Assistant Professor, Dept. of EEE	Chairperson
2	Shri. Ch. Srinivasa Rao, Assistant Professor, Dept. of EEE	Member
3	Shri. T. Dinesh, Assistant Professor, Dept. of EEE	Member
4	Mr. Narayana, Energy Division	Member
5	Mr. M. Karunakar Reddy, Transport In-Charge	Member
6	Dr. M. Venkata Ramana, Director, IQAC	Convener

Dr. M. Venkata Ramana
Director, IQAC & Convener

Copy to:

- The Hon'ble Vice Chancellor
- The Deans
- All Committee Members

Energy Review Report

Prepared by: University Energy Management Committee (UEMC)

Reporting Period: January 2024 – December 2024

1. Objectives

- To assess the baseline energy consumption across various campus facilities.
- To identify major areas of energy usage and potential wastage.
- To recommend feasible measures for energy conservation and renewable energy adoption.
- To promote sustainable mobility and reduction of fossil fuel dependency.

2. Methodology

The energy review was conducted through:

- **Collection of utility data:** Electricity bills, diesel/petrol usage, and solar energy generation records for the given period.
- **Site inspections:** Physical surveys of academic blocks, laboratories, hostels, and administrative buildings.
- **Interviews:** Discussions with facility management and maintenance teams.
- **Data analysis:** Conversion of energy data into common units (Gigajoules - GJ) and comparison across facilities.

3. Energy Consumption Summary

Source	Usage	Conversion Factor	Total Energy (GJ)
Electricity (kWh)	1,70,916 kWh	0.0036 GJ/kWh	615.29 GJ
Diesel (liters)	2,08,600 L	0.0386 GJ/L	8,051.96 GJ
Petrol (liters)	1,600 L	0.0342 GJ/L	54.72 GJ
Solar Energy Generated (kWh)	100 kWh	0.0036 GJ/kWh	0.36 GJ
Total Energy Consumed	**	**	**8722.33 GJ**

4. Key Findings

- **Lighting and HVAC systems** account for nearly 7.05 % of the total electricity use.
- **Laboratory and computing equipment** contribute significantly to energy demand.
- **Petrol and diesel vehicles** used for campus transport and power backup represent around 90% of total energy consumption.
- **Solar energy** currently contributes about 0.004% of the university's electricity demand, indicating potential for further expansion.

5. Recommendations

1. **Energy Efficiency Measures**
    - Replace remaining CFL and tube lights with LED fittings.
    - Upgrade old air-conditioning units with 5-star rated equipment.
    - Conduct preventive maintenance for all electrical systems.
2. **Smart Energy Management**
    - Install sub-meters for each major block to monitor real-time consumption.
    - Implement digital dashboards for reporting and awareness.
3. **Renewable Energy Integration**
    - Expand solar rooftop systems by an additional 200 kW capacity.
    - Explore hybrid solar-battery systems for critical areas.
4. **Reduction of Petrol and Diesel Usage**
    - Promote carpooling, cycling, and shuttle bus services.
    - Gradually introduce electric vehicles (EVs) for official transport.
    - Install EV charging stations within the campus.
5. **Awareness and Capacity Building**
    - Conduct Energy Conservation Week with poster competitions, talks, and student-led audits.
    - Include sustainability projects in final-year and club activities.

6. Baseline and Future Monitoring

The 2024 data will serve as the **baseline year** for future comparison. The university will track annual energy performance indicators such as:

- Energy Use Intensity (EUI) = Total Energy (GJ) / Floor Area (m^2)
- % Renewable Energy Contribution
- % Reduction in Diesel and Petrol Usage

7. Conclusion

The Energy Review indicates that Anurag University has made significant progress in adopting solar energy and efficient lighting systems. However, opportunities remain in the areas of transport energy reduction, smart monitoring, and equipment upgrades. The UEMC will continue to oversee the implementation of the recommended actions and report progress annually.

8. Signatures

S. No.	Name & Details	Designation	Signatures
1	Shri. Md. Yaseen, Assistant Professor, Dept. of EEE	Chairperson	
2	Shri. Ch. Srinivasa Rao, Assistant Professor, Dept. of EEE	Member	
3	Shri. T. Dinesh, Assistant Professor, Dept. of EEE	Member	
4	Mr. Narayana, Energy Division	Member	
5	Mr. Karunakar, Transport In-Charge Reddy Mavi	Member	
6	Dr. M. Venkata Ramana, Director, IQAC	Convener	

Community Outreach for Energy Efficiency

DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING

Event Name: An outreach Programme
In collaboration with National Service Scheme (Unit III) on
"Solar Energy and its Policies in India"
Date: July 16th, 2024
Time: 10:00 AM to 04:00 PM
Venue: Zilla Parishad School, Venkatapur Village, Ghatkesar.
No. of Participants: 80

Summary report on the event:

The Department of Electrical & Electronics Engineering, in partnership with the National Service Scheme (Unit III), organised an outreach programme on "Solar Energy and its Policies in India" on July 16th, 2024 at Venkatapur Village, Ghatkesar. The event, held in a government school, aimed to create awareness among students, government teachers, and rural communities about the significance of solar energy, its advantages, and the various government initiatives that support its adoption. A total of 80 participants attended the programme, including villagers, students, and NSS volunteers.

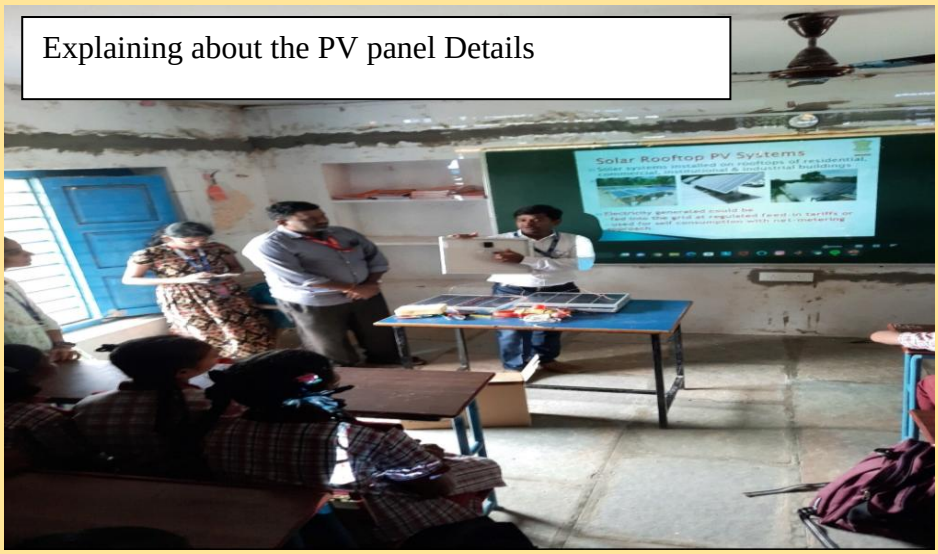
The programme, conducted from 10:00 AM to 04:00 PM, featured interactive sessions led by faculty experts who explained the basics of solar technology, its role in reducing carbon emissions, and its long-term economic benefits for households and small businesses. Special emphasis was placed on key national policies such as the Solar Rooftop Scheme, PM-KUSUM, and incentives for decentralized renewable energy systems.

Participants were educated on the practical aspects of installing and maintaining solar panels, understanding subsidies, and accessing government support. Demonstrations and real-life examples helped villagers understand how solar energy can reduce electricity costs and improve energy reliability in remote areas.

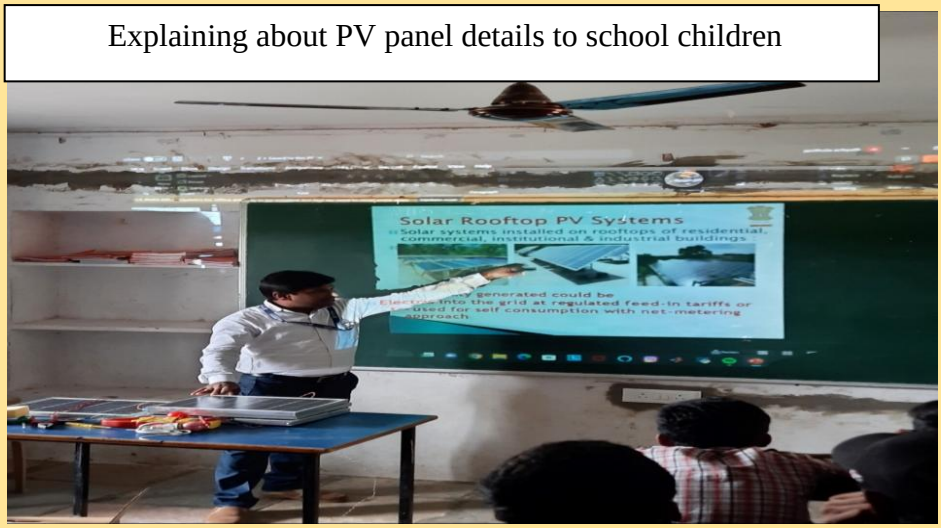
The outreach programme successfully enhanced public awareness and encouraged the local community to explore sustainable energy solutions.

Visit to Zilla Parishad School, Ankushapur, Ghatkesar

Explaining about the PV panel Details



Explaining about PV panel details to school children



One-Day Event on the Importance of Renewable Energy

- **Date: 02.12.2024**
- **Location: Venkatapur Village, Ghatkesar**
- **Partner, Good Universe, Hyderabad**

Anurag University IUCEE Student Chapter (AUISC), in collaboration with *Good Universe*, an NGO dedicated to climate action and the achievement of the Sustainable Development Goals (SDGs), organized a one-day community outreach programme on **2nd December 2024** at **Venkatapur Village**. The event was also actively supported by the **NSS Unit of Anurag University**, ensuring strong student participation and seamless coordination.

The primary objective of the programme was to engage the rural community in understanding the pressing challenges associated with the continuous dependence on fossil-fuel-based energy sources. Students and volunteers interacted with villagers to explain how conventional fuels such as coal, petrol, and diesel contribute significantly to air pollution, greenhouse gas emissions, and long-term climate change. The sessions emphasized that unchecked usage of these fuels accelerates global warming and negatively impacts agriculture, water resources, and human health—issues that directly affect rural livelihoods.

As part of the awareness initiative, the team conducted interactive discussions, demonstrations, and visual presentations to highlight the benefits of renewable energy alternatives such as solar, wind, and biomass. Village residents were briefed on the long-term cost savings, reliability, and environmental

sustainability associated with these clean energy sources. Special focus was given to the practicality of solar energy for rural households, including its potential to lower monthly electricity expenses and provide uninterrupted power during outages.

Participants from AUISC and NSS also addressed common misconceptions about renewable technologies and encouraged villagers to adopt energy-efficient practices in their daily lives. The programme concluded with a pledge from community members to gradually shift towards cleaner energy options and support climate-friendly initiatives.

The event successfully created awareness and fostered a sense of responsibility among villagers toward embracing renewable energy for a sustainable future. It also strengthened the university's commitment to community development and environmental stewardship.

Energy Efficiency Services for Industry

(Energy efficiency assessments, workshops, research on renewable energy options)

The University actively collaborates with organisations in the local energy sector to enhance experiential learning, industry exposure, and technical competency among students, while also supporting the industry through workforce development, applied research, and access to emerging talent. These engagements create a mutually beneficial ecosystem—students gain practical skills aligned with industry needs, and companies benefit from fresh perspectives, collaborative problem-solving, and opportunities to train and identify future professionals.

As part of these efforts, the University organised a Two-Day National Level Workshop on "Next Generation Electrical Engineering Using Hardware in Loop–Real Time Simulation" in collaboration with Typhoon HIL–Quarbz Info Systems on 28th and 29th February 2024. The program exposed participants to advanced real-time simulation tools used extensively in the power and energy industry, especially in renewable integration and smart grid systems.

Another significant initiative was the Two-Day Workshop on "Industry 4.0 – Internet of Things" held on 14–15 February and 16–17 February 2024. This workshop focused on digital transformation, automation, and IoT applications in the energy and industrial sectors.

To strengthen industry–academia dialogue, the University conducted a Guest Talk on "Gas Insulated Substations" on 13th March 2024, offering insights into modern substation technologies and operational challenges in power transmission networks.

Students also went on an Industrial Visit to Power Grid Corporation of India Limited (PGCIL), Hyderabad, on 6th January 2024, gaining exposure to large-scale power transmission infrastructure and grid management operations.

In July 2024, the University further expanded its industry-linked learning initiatives. On 12th July 2024, an Expert Talk on "Electrical Vehicle Technology" was organised at EV Retron Energies India Pvt. Ltd., Hyderabad, where 101 participants explored advancements in EV design, charging systems, and the evolving clean mobility ecosystem. Additionally, on 6th July 2024, 121 students visited the 6.6 MWP Solar Power Plant at Infosys, Pocharam, where they learned about solar plant operations, energy generation processes, and on-ground renewable energy management.

Workshops Conducted

#	Name of Event	Date of the Event
1	Two-Day national level workshop on "Next Generation Electrical Engineering Using Hardware in Loop-Real Time Simulation" in collaboration with Typhoon HIL-Quarbz Info Systems.	28th and 29th February, 2024.
2	Two-Day workshop on "Industry 4.0-Internet of Things"	14th-15th Feb., & 16th and 17th February, 2024.

Expert Talk

#	Name of Event	Date of the Event
1	An Expert Talk on "Electrical Vehicle Technology" at EV Retron Energies India Pvt. Ltd., Hyderabad	12th July 2024
2	Guest talk on "Gas Insulated Substations" at Anurag University	13th March 2024

Industrial Visits

#	Name of Event	Date of the Event
1	Industrial Visit to Power Grid Corporation of India Limited (PGCIL), Hyderabad	6th January 2024
2	6.6 MWP Solar Power Plant at Infosys, Pocharam	6th July 2024

MoUs with Industry

The university has valid MoUs with the following 2 energy companies:

1. Accord Power Conversion Pvt. Ltd: The partnership with APCP focuses on developing high-quality technical manpower in areas such as industrial automation, product development, technological research, and engineering innovation.
2. Eride Industries: The MoU with Eride Industries—an electric mobility and advanced technology company—focuses on skill development, student training, and joint projects in emerging areas of sustainable transportation.

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

Event Name: Expert talk on "Electrical Vehicle Technology"

Date: 12-07-2024

Time: 11:00 A.M to 12:45 P.M

Venue: EV Retron Energies India Pvt Ltd, Hyderabad

No. of Participants: 101

Summary report on the event:

The theme behind the expert talk is for the awareness of Electric Vehicle Technology

About 101 students of IV Year, on a study of Electric Vehicle Technology the expert talk is conducted on behalf of HOD on 12th July 2024, 11:00 am to 12:45pm.In this session we have learnt 5 types of vehicle Technology, followed as 1.Engine 2.Transmission 3.Braking 4.Suspension 5.Electrical or battery system.

This components work together to propel the vehicle forward, the engine is most important component of an electric vehicle or an automobile because it provides a power to move other components .The transmission aids in the transmission of power from the engine to the wheels, the suspension system contributes to a smooth and comfortable ride. When necessary, the braking system assists in stopping the vehicle.

Integration of solar energy into industrial grid, based upon the different case study's and the data from the IOT sensors is collected and the power consumption of load is quantitated and based upon it the solar panels are integrated into the grid. The in charge of the Electric Vehicle Technology explained in detail about it. It was indeed a successful expert talk completed for which we express our sincere thanks to our management, HOD of EEE department, Dr. T Anil Kumar.

Expert Talk at Anurag University

Resource person felicitated with a cheque by Staff of Dept. EEE

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

Event Name: Industrial Visit to "6.6 MWP Solar Power Plant"
Date: 06-07-2024
Time: 9:30 A.M to 3:30 P.M
Venue: Infosys , Pocharam, Hyderabad
No. of Participants: 121

Summary report on the event:

Field visit arranged for III year EEE students at 6.6 MWP Solar Power Plant Infosys SEZ Pocharam, Hyderabad Telangana

The theme behind the field visit is for the awareness of Solar Power Plant, their technology, design consideration and performance monitoring, their importance, need, advantages, disadvantages, diagnostics and servicing. etc.,

About 121 students of III Year, on a practical study tour with prior permission of the authorities concerned, went to Solar Power Plant with a capacity of 4.0175MW located at Pocharam, Hyderabad, Telangana on 06th July ,2024 around 09:30 AM. The total Solar Plant consists of 12960 panels (each panel of 310W). These panels are divided into 648 tables X 20 PV modules, of which 162 tables are connected to 1 inverter and also likewise 7 string monitoring boxes are connected to 1 inverter. So total 4 inverters are available. The no load DC voltage is 800V and during load conditions, it is around 550V to 600V. This available amount of DC is converted into 380V 3-phase AC using inverter. This 380V AC is step up to 33KV and is evacuated through substation. The in-charge of the solar power plant and our faculty members viz. K.Srinivas, M.Lalu and G.Vasantha explained in detail about the performance of the power plant such as its design, maintenance, power generation and its conversion, SCADA monitoring and the transmission of generated power to the GRID, etc., It was indeed a very successful tour and students thoroughly understood its usage in detail.

After a brief break at the plant, we thanked the managing authorities and took leave from them around 03:30 PM that day. It was indeed a successful visit for which we express our sincere thanks to our management, HOD of EEE department, Dr. T Anil Kumar.

Field visit to 6.6 MWP Solar Power Plant Infosys SEZ Pocharam, Hyderabad

Staff and the students with the Resource persons at the event

Industrial Visit to Power Grid Corporation of India Limited (PGCIL), Hyderabad on 6th January 2024

MoUs with Industry

MEMORANDUM OF UNDERSTANDING

BETWEEN

ANURAG UNIVERSITY HYDERABAD

AND

ACCORD POWER CONVERSION Pvt Ltd
HYDERABAD

FOR
INTRENSHIPS AND PROJECTS

REGISTRAR
ANURAG UNIVERSITY
Venkatapur (V), Ghatkesar (M),
Medchal (Dist).

PREAMBLE

Whereas, ANURAG UNIVERSITY HYDERABAD (AUH) at its various engineering and sciences departments is charged with responsibility of training technical and scientific manpower in various front-line areas of importance for the Nation and is also contributing to the rapidly growing scientific and technological knowledge and professional excellence in Science & Technology by undertaking industrial & applied research and consultancy.

WHEREAS, ACCORD POWER CONVERSION Pvt Ltd (APCP) is engaged in Multidisciplinary activities of Technical Consultancy, Science and Technological Research, Product Development, International Journal, Industrial Automation.

WHEREAS, both ANURAG UNIVERSITY HYDERABAD and APCP, now

- Recognizing the importance of Research & Development in the areas of imparting industrial training to the engineering/technology/science.
- Appreciating the need for creation of large reservoir of highly qualified manpower in all fields related to Science and Technological Research, Product Development, International Journal and Industrial Automation.
- Desiring to club their efforts by pooling their expertise and resources.
- Desiring to establish long term relationship to work on DST, DSIR and Funded Projects.

INTEND to form a nucleus for promoting excellent quality manpower in the fields of engineering, technology and sciences with special emphasis on Science and Technological Research, Product Development, International Journal and Industrial Automation.

NOW, THEREFORE, in consideration of the mutual promises made herein and of good and valuable consideration, the receipt and sufficiency of which both ANURAG UNIVERSITY HYDERABAD and APCP hereby acknowledge, ANURAG UNIVERSITY HYDERABAD and APCP hereby agree to sign a Memorandum of Understanding (MoU).

ARTICLE – I : SCOPE OF THE MoU

Sameen Fatima
5/1/21.
REGISTRAR
ANURAG UNIVERSITY
Venkatapur (V), Ghatkesar (M),
Medchal (Dist).

This MoU details the modalities and general conditions regarding collaboration between AUH and APCP for enhancing, within the country, the availability of highly qualified manpower in the areas of Science and Technological Research, Product Development, International Journal and Industrial Automation without any prejudice to prevailing rules and regulations in AUH and APCP without any disregard to any mechanism evolved and approved by the competent authorities under Govt. of India in so far as such mechanism applies to AUH and APCP. The areas of cooperation can be extended through mutual consent.

ARTICLE – II : SCOPE AND TERMS OF INTERACTIONS

Both AUH and APCP shall encourage interactions between the Students & Staff and Engineers, of both the organizations through the following arrangements:

a) Practical training of AUH students at APCP and AUH in the form of One-full Semester Internship at APCP and clients;
b) Joint guidance of student projects/thesis in the areas of Science and Technological Research, Product Development, International Journal and Industrial Automation and other areas of national interest at AUH by APCP on mutually agreeable terms.
c) APCP may depute its personnel as visiting faculty at AUH to supplement the teaching of any of the regular Course or specialized topics. Further, AUH may request APCP to design and teach a Course or Courses which it deems fit to enhance quality and performance of its Students. Such Courses maybe run at any mutually convenient premises.
d) APCP may request AUH to design and teach a Course or Courses which it deems fit to enhance quality and performance of its employees. Such Courses maybe run at any mutually convenient premises.
e) APCP personnel, as well as research scholars, may also be allowed to enroll for their M.Tech. at AUH, subject to availability of seats, research facilities and subject to their fulfilling eligibility criteria and all other academic regulations of AUH.
f) APCP may seek assistance/guidance of AUH HoDs, Internships in product/process modification, modernization, trouble shooting, etc.
g) Would allow the industrial visits of students for half/full day to provide them with an exposure to various equipment, instrument, etc.
h) APCP may showcase its business activities at the Seminar/Workshop/Conference, etc. at AUH that will be conducted time-to-time.
i) APCP may avail library, Internet, computational facilities at AUH.
j) The students will carry out part of their MTech./BTech. project at AUH and APCP depending on the nature of the work as per rules of the respective institute depending on facilities and requirements.
k) There will be no restriction on the contents of the thesis and on publication of results of the thesis, subject to the condition that no Intellectual Property Rights can be secured for any part of the work which will be decided with mutual consent.

REGISTRAR
ANURAG UNIVERSITY
Venkatapur (V), Ghatkesar (M),
Medchal (Dist).

l) Both APCP and AUH will be free to independently carry out follow-up research on the thesis work conducted under this scheme.

m) If the outcome of a project related to product development, process technology and design etc. which involves matter of secrecy and concern with security of the State and the Country, the same will not be allowed for publication/printing in any form such as Electronically/verbal, etc. If the outcome of a project results into an intellectual property, for which rights can be secured, it will be decided on case-to-case basis. Similarly, sharing of expenditure in securing such rights and income accrued through royalty etc by the parties under the law will be decided on case- to-case basis after mutual consultation.

ARTICLE-III : SHARING OF FACILITIES

a) APCP shall extend its facilities for AUH students towards the smooth conduct of Internships and Projects.

b) AUH and APCP make provisions to share their respective important R&D facilities in order to promote academic and research interaction in the areas of cooperation.

c) AUH and APCP permits the sharing software and other materials and components developed in-house in the areas of cooperation, if permissible within the rules governing the two institutions. However, responsibility for safety of software and other materials during the exchange will rest on respective Head of academic department/section.

d) AUH and APCP provide access to the library facilities to, members of faculty and students as per the prevailing rules and norms in the respective institutes.

ARTICLE – IV : CO-ORDINATION OF THE PROGRAMME INCLUDING FINANCIAL ARRANGEMENTS

a) The collaborative program between AUH and APCP coordinate by a coordination committee appointed by local head of both the Institutions.

b) Financial arrangements for each specific collaboration will be decided on a case-to-case basis and brought on record in each case after due approval from heads of both the Institutions.

c) Any Financial transactions will be made in the name of ACCORD POWER CONVERSION Pvt Ltd and ANURAG UNIVERSITY HYDERABAD.

d) DST, DSIR and Funded projects and finances related to the project will be handled in a consortium agreed upon by both AUH and APCP.

5/11/21

REGISTRAR
ANURAG UNIVERSITY
Venkatapur (V), Ghatkesar (M),
Medchal (Dist).

ARTICLE-V : EFFECTIVE DATE AND DURATION OF MoU

a) This MoU will be effective from the date of its approval by competent authorities at both ends.
b) The duration of the MoU will be for a period of 5 years from the effective date.
c) During its tenancy, the MoU may be extended or terminated by a prior notice of not less than six months by either party. However, termination of the MoU will not in any manner affect the interests of the students & faculty who have been admitted to pursue a Training/Project under the MoU.
d) Any clause or article of the MoU may be modified or amended by mutual agreement of APCP and AUH.

ARTICLE - VI : IPR

Rights regarding publications, patents, royalty, ownership of software/design/product developed etc. under the scope of this MoU, should be decided by APCP.

ARTICLE – VII : CONFIDENTIALITY

During the tenure of the MoU both AUH and APCP will maintain strict confidentiality and prevent disclosure of all the information and data exchanged under the scope of this MoU for any purpose other than in accordance with this MoU.

Both AUH and APCP shall bind their respective personnel who come into possession or knowledge of any confidential information not to disclose the same to third parties without written approval of the disclosing party or use such confidential information for any use other than intended under this agreement or PROJECTS.

Further both AUH and APCP should put in place adequate and reasonable measures to keep and store confidential information secure to prevent any unauthorized use.

CONFIDENTIAL INFORMATION shall mean any proprietary information, data or facts belonging to PARTIES collectively or severally, disclosed by the disclosing party under this agreement or any subsequent agreement, whether in writing, verbal or electronically, irrespective of the medium in which such information is stored, which is marked confidential or with any other words having similar meaning by the disclosing party, or specifically agreed to be kept confidential by the parties, or declared or identified so by the disclosing party before such disclosure or during the discussions. However confidential information should not include any data or information which:

(a) is or becomes publicly available through no fault of the receiving party,
(b) is already in the rightful possession of the receiving party prior to its receipt of such data or information;
(c) is independently developed by the receiving party without reference to the confidential information of the disclosing party

REGISTRAR
ANURAG UNIVERSITY
Venkatapur (V), Ghatkesar (M),
Medchal (Dist).

(d) is rightfully obtained by the receiving party from a third party or is in the public domain
(e) is disclosed with the written consent of the party whose information it is, or
(f) is disclosed pursuant to court order or other legal compulsion, after providing prior notice to the disclosing party.

ARTICLE – VIII : AMENDMENTS

Any amendment and/or addenda to the AGREEMENT should be in writing and signed by the PARTIES hereto and shall only after such execution be deemed to form part of the AGREEMENT and have the effect of modifying the AGREEMENT to the extent required by such amendment or addenda.

ARTICLE – IX : RESOLUTION OF DISPUTES

a) This agreement shall take effect and be construed in accordance with the Laws of India and be subject to the jurisdiction of the courts at Hyderabad.

b) The dispute or difference whatsoever arises between PARTIES in relation to or in connection with this AGREEMENMT both the parties should first try to resolve the dispute/difference amicably between them, failing which the matter can be referred to and settled through arbitration.

ARTICLE – X : MISCELLANEOUS

a) The headings and sub-headings are inserted for convenience only and should not affect the construction of this Agreement.

b) After this Agreement has been signed, all preceding understandings/negotiations and correspondence pertaining to it will become null and void.

REGISTRAR
ANURAG UNIVERSITY
Venkatapur (V), Ghatkesar (M),
Medchal (Dist).

IN WITNESS WHEREOF PARTIES HERE TO HAVE ENTERED INTO THIS AGREEMENT EFFECTIVE AS ON THE DAY AND YEAR FIRST WRITTEN ABOVE

ACCORD POWER CONVERSION PVT. LTD. HYD-62

Manager Human Resource
ACCORD POWER CONVERSION Pvt Ltd
HYDERABAD

5/1/21

Registrar
~~Vice Chancellor~~
ANURAG UNIVERSITY
HYDERABAD

REGISTRAR
ANURAG UNIVERSITY
Venkatapur (V), Ghatkesar (M),
Medchal (Dist).

WITNESS

1.....

2.....

DATE:

WITNESS

1.....

2.....

DATE:

MEMORANDUM OF UNDERSTANDING (MOU)

This MoU is made on this 9th day of December, 2020 at **Anurag University**
BY and BETWEEN

M/s Eride Industries, having its registered office at Plotno 2-24-90/3, Survey No. 553, Lakshmi Narayana Nagar, Hyderabad, Telangana 500039, INDIA hereinafter referred to as "**the Company**" (which expression shall wherever the context so admits include its successors in interest, liquidators, administrators and permitted assignees) of the **First Part**

AND

ANURAG UNIVERSITY, a Private University located at Venkatapur (V), Ghatkesar Mandal, Hyderabad, Telangana 500088, hereinafter referred to as "**the Institute**" (which expression shall wherever the context so admits include its successors in interest, liquidators, administrators and permitted assignees) of the **Second Part**

WHEREAS all the parts are hereinafter referred to as "**Parties**";

AND WHEREAS, the parties by this MoU desire to establish common framework to facilitate in terms of exchange of information, material, to execute other agreements as may be necessary for the Project, Skill Development, Training Programmes and Placements.

NOW THEREFORE, in consideration of the promises and mutual covenants hereinafter contained, the Parties hereto agree as follows:

1. **OBJECTIVES OF THE MOU**
   The objective of this Memorandum of Understanding is:
   i. To promote interaction between Anurag University and Eride Industries in mutually beneficial areas.
   ii. To maintain healthy association between Anurag University and Eride Industries.

2. **PROPOSED MODES OF COLLABORATION**

9/12/2020

09/12/2020

Anurag University and Eride Industries propose to collaborate through

1. Internships and UG and PG student projects and at both the ends.
2. Basic and advance training programs to fresh recruits of Eride Industries in terms of analytical and formulation development. Encouraging the employees of Eride Industries for doing Ph.D. degrees in Anurag University. The eligibility criteria for selection of the candidates will be under the sole discretion of Anurag University.
3. Developing Certification programs in various technical and advanced areas in association with Eride Industries by providing complete hands on as a part of Skill development programme.
4. Training of Eride Industries personnel through Continuing Education Programs and Skill Development conducted by Anurag University in areas of interest to Eride Industries
5. Any other appropriate mode of interaction agreed upon between Anurag University and Eride Industries.

Each of the above modes of interaction will be initiated by entering into a separate agreement between the two parties.

3. TECHNICAL AREAS OF COLLABORATION

The principal technical areas of collaboration between Anurag University and Eride Industries will be as set out separately.

4. SHARING OF RESOURCES

The Parties shall share the required resources to further the Research Project, Training Programme and to meet the objectives in terms of this MoU.

5. RIGHT OF USE

i. The background know-how/ IP of the Projects, Training programme belongs to both the parties and can be used freely by the parties for execution of the project within the scope of their own objectives.

ii. Each party shall promptly make written disclosure to discuss and coordinate with one another in the aspects of Project IP, publication needs, and commercial exploitation of Project IP etc.

6. CONFIDENTIALITY

i. During the tenure of the MoU, all the Parties, undertake to maintain strict confidentiality

9/12/2020

09/12/2020

and refrain from disclosure thereof, of all or any part of the information and data exchanged/generated from the Project for any purpose other than in accordance with this MoU. It shall be the responsibility of all the Parties to ensure maintenance of such confidentiality in respect of their behalf and on behalf of their employees, representatives and associates involved in the Project.

ii. The Parties shall not have any obligation of confidentiality with respect to any information that:

a. is in the public domain by use and/or publication at the time of its disclosure by the disclosing party; or
b. was already in possession of the recipient prior to receipt from the disclosing party; or
c. is properly obtained by the recipient from a third party with a valid right to disclose such information and such third party is not under confidentiality obligation to the disclosing party; or
d. was disclosed to any third party on a non-confidential basis prior to commencement of the Project; or
e. is required by public authority, by law or decree.

7. INTELLECTUAL PROPERTY

1. ***Force Majeure***

The Parties shall not be held responsible for non-fulfillment of their respective obligations in successful completion of the Project under this MoU due to the exigency of one or more of the *force majeure* events such as but not limited to acts of God, war, flood, earthquakes, strikes not confined to the premises of the Party, lockouts beyond the control of the Party claiming *force majeure*, epidemics, riots, civil commotion etc. lying beyond the reasonable control of and not brought about at the instance of the Party claiming to be affected by such event and which has caused the non-performance or delay in performance; provided on the occurrence and cessation of any such event the Party affected has given a notice in writing to the other Parties within one month of such occurrence or cessation.

2. Validity and Termination

i. The MoU shall be effective from the date of its signing by all the Parties. The MoU shall be valid for valid for 5 years.

ii. The Parties may renew/terminate this MoU by mutual agreement.

3. Alterations

Any alteration and amendment to this MoU shall be made in writing by all the parties

9/12/2020

09/12/2020

involved

4. **Transferability of Rights and Duties**
Rights and Duties in this MoU cannot be transferred to third party either in whole or in part, without the prior written consent of the other parties.

5. A separate **'Coordinating Committee'** for project monitoring in between principal applicant and collaborator(s) may be constituted.

6. **Dispute Resolution and Governance**
The parties agree to use reasonable endeavors to amicably settle any dispute arising among them in relation to the execution of the Project. (Arbitration provisions may be added).

The MoU shall be governed by the Laws of India.

7. **Notices**
Notices shall be sent to the contact person at the address as set forth below or such address as any party shall have furnished to the parties.
IN WITNESS WHEREOF the Parties hereto through its duly authorized representatives have signed this MoU on the day, month and year mentioned hereinbefore.

Parties - Authorized Signatory

For and on behalf of M/s **ERIDE INDUSTRIES LIMITED "the Company"**

9/12/2020.

09/12/2020

For and on behalf of **ANURAG UNIVERSITY "Private University"**

Policy Development for Clean Energy Technology

DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING

Event Name: An outreach Programme
In collaboration with National Service Scheme (Unit III) on
"Solar Energy and its Policies in India"
Date: July 16th, 2024
Time: 10:00 AM to 04:00 PM
Venue: Zilla Parishad School, Venkatapur Village, Ghatkesar.
No. of Participants: 80

Summary report on the event:

The Department of Electrical & Electronics Engineering, in partnership with the National Service Scheme (Unit III), organised an outreach programme on "Solar Energy and its Policies in India" on July 16th, 2024 at Venkatapur Village, Ghatkesar. The event, held in a government school, aimed to create awareness among students, government teachers, and rural communities about the significance of solar energy, its advantages, and the various government initiatives that support its adoption. A total of 80 participants attended the programme, including villagers, students, and NSS volunteers.

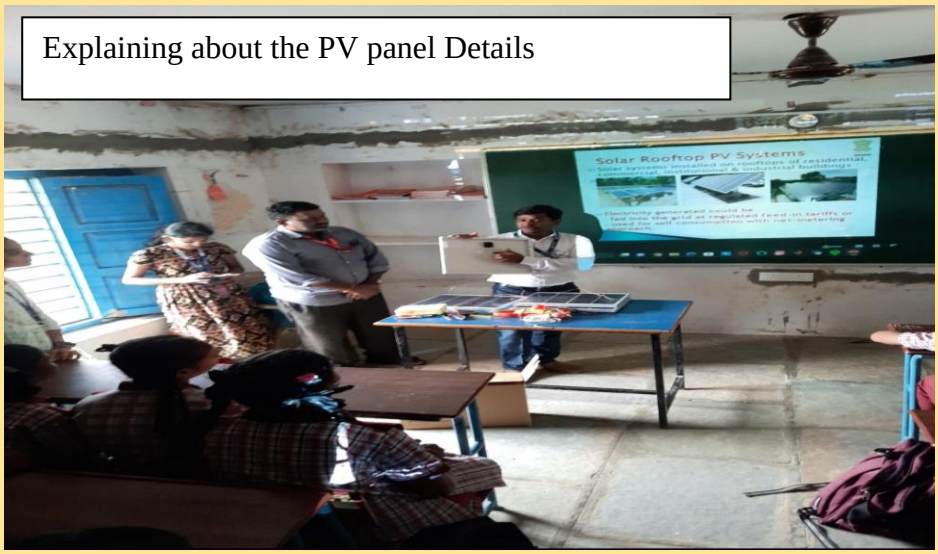
The programme, conducted from 10:00 AM to 04:00 PM, featured interactive sessions led by faculty experts who explained the basics of solar technology, its role in reducing carbon emissions, and its long-term economic benefits for households and small businesses. Special emphasis was placed on key national policies such as the Solar Rooftop Scheme, PM-KUSUM, and incentives for decentralized renewable energy systems.

Participants were educated on the practical aspects of installing and maintaining solar panels, understanding subsidies, and accessing government support. Demonstrations and real-life examples helped villagers understand how solar energy can reduce electricity costs and improve energy reliability in remote areas.

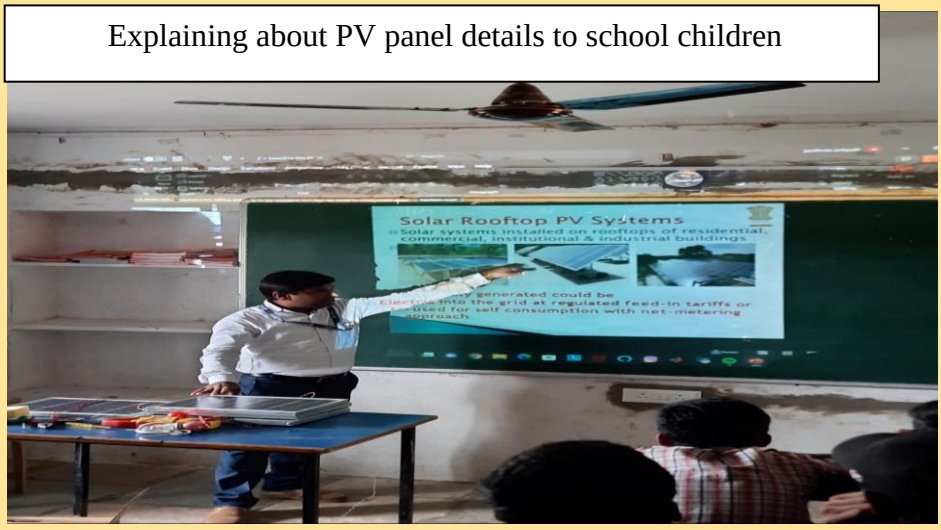
The outreach programme successfully enhanced public awareness and encouraged the local community to explore sustainable energy solutions.

Visit to Zilla Parishad School, Ankushapur, Ghatkesar

Explaining about the PV panel Details



Explaining about PV panel details to school children



Assistance to Low-Carbon Innovation

Anurag University provides a comprehensive and structured support system for nurturing innovation and developing start-ups among students, faculty, staff, and alumni. The University aims to build a strong entrepreneurial ecosystem through the Anurag University Innovation Centre (AUIC) coordinates all innovation-related activities, offering pre-incubation and incubation facilities.

The University provides start-ups access to fully equipped workspaces, prototyping facilities, mentorship support, and business development assistance. Students and faculty are encouraged to convert innovative ideas into viable business models through guidance in technology development, design thinking, financial planning, marketing, and legal matters. Start-up teams are permitted to use university facilities, seek flexible academic options, and even replace academic projects with entrepreneurial work. Students can also earn credits and register their company using the university address, with approval.

To support early-stage ventures, the University has an Innovation Fund and encourages start-ups to raise external funding through government schemes, CSR funds, angel investors, venture capitalists, and alumni networks. AU also facilitates IPR licensing, equity sharing arrangements, and technology commercialisation to help entrepreneurs move from ideation to market readiness. Networking events, ideation competitions, hackathons, workshops, and short-term courses strengthen the innovation pipeline. Faculty and staff are incentivised to participate in entrepreneurial activities, and performance evaluation mechanisms recognise contributions to innovation and start-up development.

Through collaborations with industry, national institutions, international partners, and research organisations, the University provides ample exposure and opportunities for start-ups to grow. Regular impact assessments measure progress through parameters such as number of start-ups created, IPR filings, funding access, and utilisation of incubation facilities. Overall, Anurag University offers extensive institutional, academic, financial, infrastructural, and mentoring support to foster a vibrant start-up ecosystem.

In 2024, support was offered to publishing patents for the following two low-carbon technologies. Support is being offered to get the patent granted.

Low-Carbon / Green Technology–Related Patents

1. Solar Water Pumping System for Sustainable Water Management

- **Patent Application No.:** 202441074110
- **Title:** *Solar water pumping system for sustainable water management*

- **Inventors / Contributors:**
  - Mr. K. Srinivasa Rao
  - Dr. T. Anil Kumar
  - Mr. Gugulothu Srikanth
  - Mr. Jatavath Nagaraju
  - Ms. Karupothula Anusha
- **Assignee:** Anurag University
- **Relevance:**
  - Uses **solar renewable energy**
  - Contributes to **low-carbon rural/agricultural infrastructure**
  - Reduces dependency on fossil-fuel-driven pumps

2. Graphene-Based Carbon Nanotube Composite for Ultra-Flexible High-Performance Displays

- **Patent Application No.:** 202441023969
- **Title:** *Graphene-based carbon nanotube composite for ultra-flexible high-performance displays*
- **Inventors / Contributors:**
  - Mr. E. Sadanandam
  - Dr. CH S. Naga Prasad
  - Dr. Kavuluri Pushpalatha
  - Capt. Dr. Veeraiah Adamilli
  - Dr. D. Lakshmi
- **Assignee:** Anurag University
- **Relevance:**
  - Not a low-carbon technology by application, but includes **carbon-based advanced materials** with potential for energy-efficient devices.