



Progress Report (2022-23)

SDG 7 Affordable and clean Energy

The United Nations General Assembly's 17 Goals for Sustainable Development (SDG's) provide priorities to work towards the well-being of the Earth and its people. Integral University understands the importance and urgent nature of SDG's and is committed to contribute in achievement of SDGs. The commitment towards SDGs is reflected through the work done within departments, and other units of the university. Progress reports of SDG 1 is as follows.

Metric	Description
7.1 Research on Clean Energy	Clean energy refers to energy sources that produce minimal or no greenhouse gas emissions and have a reduced environmental footprint. This includes renewable energy technologies such as solar, wind, hydroelectricity, and geothermal, as well as other low-carbon solutions like nuclear power and hydrogen fuel. As the world faces growing environmental challenges, such as climate change and resource depletion, research on clean energy has become a critical area of focus for governments, industries, and scientific communities. 232 Research articles have been published in the area of Clean Energy.
7.2.1 Energy-efficient renovation and building	Integral University has formulated a Policy for Energy-efficient renovation and building as a part of the Green policy. https://www.iul.ac.in/IQAC/Green-Policy.aspx
7.2.2 Upgrade buildings to higher energy efficiency	As part of our environmental policy, Integral University works to keep up the fight to protect natural resources like energy, water, and air. To become one of the top green campuses in this area, we implemented some of the greatest techniques and practices. In addition to offering a pollution-free setting that enhances the quality of the learning environment, Integral University's green campus provides a venue for training, education, and upholding sustainability norms. Our strategy covers upgrading a structure to a higher energy-efficient indication like: Energy Efficient Appliances Usage, Smart building implementation, Renewable energy production by each resource, Electricity usage, green building implementation,
7.2.3 Carbon reduction and emission reduction process	Carbon footprint in Complete one session 2022-23= 5517.93 metric tons
7.2.4 Plan to reduce energy consumption	Key Strategies for Reducing Energy Consumption: • Conduct an Energy Audit • Set Energy Reduction Targets • Upgrade to Energy-Efficient Equipment and Appliances • Implement Smart Energy Management Systems • Improve Insulation and Building Design • Optimize Lighting Usage • Invest in Renewable Energy Sources • Regular Maintenance and Monitoring
7.2.5 Energy wastage identification	Methods for Identifying Energy Wastage: • Energy Audits • Installing Smart Meters and Energy Monitoring Systems • Occupancy Sensors and Timers

	• Thermographic Imaging and Insulation Testing • Analysing Utility Bills and Usage Patterns • Building Automation System • Employee and Occupant Feedback
7.2.6 Divestment policy	Integral University has formulated a Divestment Policy as a part of the Green policy. https://www.iul.ac.in/IQAC/Green-Policy.aspx
7.3.1 Indicator: Energy usage per sqm	Energy usage: 0.41259 GJ
7.4.1 Local community outreach for energy efficiency	Integral University, plays a vital role not only in academic excellence but also in contributing to community development through various sustainability initiatives. One such initiative focuses on promoting energy efficiency within the local community. By leveraging its resources, expertise, and student involvement, the university aims to raise awareness, foster sustainable practices, and create a ripple effect of positive environmental impact in the surrounding areas.
7.4.2 100% renewable energy pledge	Integral University, committed to sustainability and environmental responsibility, has taken a bold and transformative step toward a greener future by pledging to transition to 100% renewable energy. This pledge aligns with the university's core values of sustainability, social responsibility, and innovation, and reflects a long-term commitment to reducing its environmental footprint while contributing to global efforts against climate change.
7.4.3 Energy efficiency services for industry	Integral University, renowned for its academic excellence and commitment to sustainability, has expanded its role in supporting industrial sustainability through its Energy Efficiency Services for Industry program. This initiative is designed to assist local and regional industries in optimizing their energy usage, reducing costs, and improving their environmental performance. By leveraging the expertise of its faculty, research centres, and student involvement, Integral University is playing a pivotal role in guiding industries toward energy-efficient operations, aligning with global sustainability goals.
7.4.4 Policy development for clean energy technology	Integral University has formulated a Policy development for clean energy technology https://www.iul.ac.in/IQAC/Green-Policy.aspx
7.4.5 Assistance to low-carbon innovation	Key Components of Assistance to Low-Carbon Innovation: • Research and Development in Low-Carbon Technologies. • Innovation Incubator and Accelerator Programs. • Collaboration with Industry and Government • Educational Programs and Curriculum Development. • Community Engagement and Awareness Campaigns.
7.5.1 Low-carbon energy use	Key Components of Low-Carbon Energy Use at Integral University: • Integration of Renewable Energy Sources. • Energy Efficiency in Buildings and Infrastructure. • Promotion of Energy-Conserving Practices. • Collaboration with Industry and Government on Low-Carbon Energy Projects. • Monitoring and Reporting on Energy Use and Carbon Emissions.

Activity Report

Name of the activity	Seminar on Emerging Trends in Non-Conventional Energy Resources		
Organized by	ECE, Physics, EE	Date	22 nd October 2022
Resource Person	Multiple	Mode	Offline
Total Participant	94	IU students participated	35

The National Seminar titled “Emerging Trends in Non-Conventional Energy Resources” was organized by the Department of Electronics and Communication, Physics & Electrical Engineering on October 22, 2022 at Integral University, Lucknow. This was a one-day National Seminar and well attended by eminent academicians, faculty members & students from various Universities and educational institutions from different parts of the country & representatives of government bodies and industries.

Aligned Activity Outcomes with Objectives

Objectives	Outcomes
Main objective of this seminar is to present the latest research, technology, innovation and commercial aspects related to renewable energy sources.	Sustained reliable power generation is the key to nation’s growth. In the backdrop of increasing energy demand, researchers, industries and policymakers are focusing on new and renewable energy sources as a viable solution.

GLIMPSES OF THE ACTIVITY

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INTEGRAL UNIVERSITY

A National Seminar
on
“Emerging Trends in Non Conventional
Energy Resources”

Date: 22nd October, 2022

Organized by: Department of Electronics & Communication
Engineering, Physics & Electrical Engineering

Technically / Financially sponsored by




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Activity Report

Name of the activity	Workshop on Energy Conservation Building Codes		
Organized by	Faculty of Architecture, Planning & Design	Date	5 th April 2022
Resource Person	-	Mode	Offline
Total Participant	67	IU students participated	51

The purpose of the workshop is to train students in the contemporary techniques used in various sectors for energy conservation. The resource persons are from the UPNEDA who are pioneer and expertise in their field. The workshop will be helpful and beneficial for the students of Architecture, Civil Engineering, Mechanical Engineering and Electrical Engineering.

Aligned Activity Outcomes with Objectives

Objectives	Outcomes
• Raise Awareness on ECBC • Provide Knowledge on Energy-Efficient Building Practices • Promote the Implementation of ECBC • Bridge Knowledge Gaps	• Enhanced Knowledge on ECBC Compliance. • Increased Adoption of Energy-Efficient Practices. • Building a Network of Professionals. • Practical Knowledge Transfer.

GLIMPSES OF THE ACTIVITY



Energy Conservation & Renewable Energy

The Institution has the following facilities for alternate sources of energy and energy conservation viz. Solar energy, Wheeling to grid, Sensor based energy conservation and utilize the LED bulbs, Bio-Gas Plant, and power efficient equipment. IU has installed a 1MW solar PV plant for fulfilling a part of its energy requirement through renewable energy which results in an estimated 1460 Tons reduced carbon emission per year.

Solar Development Group

