ANNUAL REPORT

SDG

7

AFFORDABLE AND CLEAN ENERGY

UNIVERSITY OF CHITTAGONG
Chittagong-4331, Bangladesh

IN THE QUEST FOR A CLEANER ENERGY FUTURE (SDG 7) FOR THE UNIVERSITY OF CHITTAGONG

The University of Chittagong is committed to achieving Sustainable Development Goal 7 (SDG 7) - Affordable and Clean Energy. The university's endeavors in promoting energy efficiency, sustainability, and the adoption of renewable energy sources are shaping a more sustainable future. Despite lagging in formulating a dedicated policy, the university is now moving forward to make clean energy a priority.

The national grid meets the total demand for electrical energy on the campus. The demand for electricity varies with season and episodic events. The usual consumption on summer days is 1.8 to 2 MW, which falls to 1.2 MW in winter. Demand peaks during admission test season at 2.8 to 3 MW. During vacation, the demand is 1.2 MW. There is no current solar or renewable capacity, but the plan is underway to add solar parks to the university grid.

The university has implemented several strategic measures in its quest for energy efficiency across its campus. A notable policy is the discouragement of new air conditioner installations aimed at reducing overall energy consumption. The university's approach to infrastructure development, emphasizing energy efficiency, has resulted in it boasting the lowest per-student energy consumption in the country. The university's use of dedicated shuttle trains for student commutes has helped it to lower transport energy needs and related carbon footprint.

Education and awareness are integral to Chittagong University's approach to SDG 7. The introduction of a dedicated course on energy management at IFES is a prime example of this. This course, along with the inclusion of energy-related topics in various departmental curricula, underscores the university's dedication to equipping its students with the knowledge and skills necessary for the future of sustainable energy.

The Institute of Forestry and Environmental Sciences (IFES)'s research bolsters Chittagong University's sustainable energy ambitions. Faculty members have been studying energy use, efficiency, and sustainability. Examples include the development of a performance index for improved cooking stoves (ICS). This innovation aims to revolutionize cooking methods, making them more energy-efficient and environmentally friendly. The university's commitment to sustainable energy extends beyond research. IFES has undertaken a remarkable project focusing on transforming market waste into biomass, creating a renewable energy source that simultaneously tackles waste management challenges. IFES also did a life cycle assessment of the national grid energy mix to offer critical insights into the environmental footprint of current energy practices, guiding future strategies toward sustainability. The Department of Chemistry at the university is making strides in renewable energy, particularly in solar panel fabrication. This research is critical in harnessing solar power, a key element in transitioning to sustainable energy solutions. Additionally, the university's research on biofuels derived from jatropha, karanj, and algae positions it as a leader in exploring alternative energy sources.

The university has already formulated a project to install solar parks and rooftop solar and submitted for funding from the government. Hopefully, the grant will be given, and the university will start the transition from a grid-based energy consumer to a user of renewable energy and contribute green energy to the national grid through net metering.

Chittagong University's multi-dimensional approach to SDG 7 positions it as a leader in sustainable energy within Bangladesh and sets a global benchmark for academic institutions. As the university continues to expand its efforts in sustainable energy, its contributions are expected to play a pivotal role in achieving the SDG 7 targets nationally and globally, heralding a new era of energy sustainability.