

Best Practice 2

“TREES” Towards Renewable Energy and Environmental Sustainability

Al - Ameen College is always committed to and responsible for taking initiatives for protecting and conserving the earth, energy and environment and pledges to achieve carbon neutrality in 2024. All the energy and environment conservation efforts of different department, clubs, cells are coordinated under the initiative “TREES-Towards Renewable Energy and Environmental Sustainability”.

Towards a carbon neutral and Sustainable campus TCNSC

Objective

Al Ameen College launched the initiative “**TREES**”-Towards **R**enewable **E**nergy and **E**nvironmental **S**ustainability (for a Carbon Neutral Campus)” with an objective mould a generation that follow the principle for a sustainable environment

- To create an awareness on Energy and environment conservation among the students, staff and society to achieve a carbon neutral campus
- To promote the Renewable Energy resources and integrating green technologies in all walks of life to address the prevailing social and environmental challenges
- To conduct Value Added Courses, implement Energy Conservation Techniques, use Renewable Energy Sources as an alternative of conventional energy sources
- To conduct energy audit, water audit and Biodiversity audit (Green Audit) and carbon audit periodically in association with the students and staff to sensitize them the significance of efficient utilisation of energy

The Context

Kerala has witnessed a series of natural disasters in the last four years due to the alarming climatic changes and human factors that exacerbated it. Moreover the uncompromising needs of the present generation exploited the nature and natural resources without leaving it for future generation.

To achieve sustainability, and improve the quality of our environment, it is essential to use renewable energies and energy efficiency measures that ultimately will reduce energy consumption and environment pollution .Understanding the need for to enact policies that incorporate green practices and technologies and to create awareness on environment, energy and its effective utilisation among the students for a sustainable development the college join hands with NGO’s, Government organisations and other institutions and work for building a carbon neutral campus by the end of 2024

The Practice

“Energy Conservation Activities for A Sustainable Future” –

- Adoption of Green Energy Technologies -Al Ameen College, Edathala installed on grid 50 KW Solar Power Module and the complete energy needs of college is now met by this alternate energy. The unit cost of Rs.28,00,000/- is fully taken by the college management without the support of any external funding agency.

- Initiatives for Conservation of Electrical Energy -College always take effective measures to conserve the electrical energy. As a first step the students of our college under the guidance of faculty conducted Energy audit in association with an external agency Tropical ---(TIES).After that we have followed the recommendation of this audit report and replaced all the conventional light sources with energy efficient and eco-friendly lights, conventional fans with BLDC fans, CRT monitors of computers with LED monitors and implemented the policy of buying the star labelled products
- Trainings, Awareness classes, Campaigns for Students, Staff and Society related to Energy Conservation
To sensitize the students, staff and society about the energy conservation, energy conservation club, nature club and department of physics organised various awareness classes .energy literacy drives, hands on expertise workshop for assembling LED lamps etc.

Water Conservation

The water is properly managed and preserved in the campus. The students are keeping regular vigil on water usage and methods such as generating awareness of water conservation through banners and posters. Need for regular discussions among the group members for bringing new methods and ways for conserving water in and around the campus.

Rain water harvesting system is constructed in the campus. A big pit in the backyard of college helps rain water to seep into the earth. Sloping roof and channels in college create an easy to flow the rain water to such pits. A pond is also maintained in our campus which is the main source of water in the campus. Besides this pond, a well and bore well is also maintained

Sustainable energy conservation

As a measure of reducing the carbon emission, the institution take intensive care and replaced the consumption of fossil fuel in the college canteen by installing a biogas plant of 20 Kg capacity.

Eight bicycles were purchased for the local travel from office and students are encouraged to use bicycle for their travel to college. Carpooling among staff and the use of college bus are encouraged to reduce the carbon emission

Evidence of Success

In the year 2020-2021 itself the college could save 43,500 unit of electrical energy (Savings in Rupees = Rs 3,95,000) due to the implementation of Solar power ,and the replacement of conventional equipments with energy efficient equipments

The savings incurred due to the installation of Biogas plant in the College canteen for the year 2020-2021 is Rs 54,000

As a result of the continuous efforts of awareness classes, campaigns and trainings given to the students, an incubation unit of Energy efficient Lighting source is set up in the college. The complete LED tubes required to replace the conventional Light sources are assembled in that incubation unit by the students. Students were moulded as master trainers in assembling these light sources.

Waste management unit set up in our college by the combined effort Nature club and Department of Biotechnology changed the campus a lot. Wastes were segregated as biodegradable and nonbiodegradable. Biomedical wastes are properly decontaminated before disposal. E wastes are handed over to external agency for recycling. Food wastes are collected and used in Biogas plant installed in college canteen

These steps implemented in our institution are the milestones in our journey towards achieving carbon neutral campus by the end of 2024.

Problems encountered

These carbon reduction goals are very aggressive and only feasible with significant financial investment. The current budgetary constraints, standard practices for evaluating projects and purchasing rules are hindrances faced to reach the goal of achieving a carbon neutral campus.