

institution, must ensure to reduce the consumption of energy at our campus and also at our residential places. The other initiatives that can be taken up in this direction is to manage to decrease the use of energy by performing efficiency, upgrading and investing in technology like solar energy plants. If our institution is capable enough to achieve this target, it can be safely declared to be the best practice of our institution. All that depends on the mind set and habits of consumers/stake holders of the institution. We have the energy on the earth in a stipulated amount in terms of unit. It cannot be increased. It can only be changed for different uses. Therefore, as a law-abiding citizen of India, it is our fundamental duty to make judicious use of energy. Such efforts would result not only in reducing the use of energy but also in saving energy for future welfare of mankind as a whole. It will bring cuts in the prices and make us free from pollution leading to brighter chances for healthy environment.

Policy statements

Swarnnim Startup and Innovation University recognizes the critical importance of energy conservation in fostering a sustainable and environmentally conscious campus community. Energy Conservation Policy aims to address various aspects of energy consumption, management, and efficiency within our premises. Through this policy, the institution dedicated to curbing energy footprint and instilling a culture of energy consciousness among our students, faculty, and broader community. It actively promote energy- saving initiatives and encourages the active participation of all stakeholders in endeavors that contribute to efficient energy consumption.

The Swarnnim Startup and Innovation University is committed to promoting energy conservation and sustainability throughout its campus and operations. As such, we have developed the following energy conservation policy statements:

1. **Commitment to Efficiency:** We pledge to continually assess and improve the efficiency of our energy usage across all facilities and activities.
2. **Education and Awareness:** We will actively promote education and awareness initiatives to engage our students, faculty, and staff in understanding the importance of energy conservation and adopting sustainable practices.
3. **Resource Optimization:** We will strive to optimize the use of resources such as electricity, water, and natural gas by implementing energy-efficient technologies and practices.

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4. **Reduction of Carbon Footprint:** We are dedicated to reducing our carbon footprint by minimizing energy consumption, utilizing renewable energy sources wherever feasible, and implementing emission reduction strategies.
5. **Compliance and Standards:** We will adhere to all relevant energy conservation regulations and standards, and endeavor to exceed compliance requirements wherever possible.
6. **Continuous Improvement:** We are committed to continuously monitoring our energy usage, setting targets for improvement, and implementing measures to achieve them.
7. **Stakeholder Engagement:** We recognize the importance of engaging with stakeholders, including students, faculty, staff, and the local community, to foster a culture of energy conservation and sustainability. Through the implementation of these policy statements, the Swarnim Startup and Innovation University aims to become a leader in energy conservation and sustainability, contributing to a cleaner and greener future for generations to come.

Objective of the policy

- To assess our energy usage and measure its impact on the environment.
- To conduct energy and environment audit regularly.
- To reduce local air pollution emissions by prohibiting the entry of vehicles in to campus and using pedestrian-friendly roads.
- To install photovoltaic solar panels for the generation of alternate energy.
- To install LED bulbs in the complete campus to save energy.
- To develop systematic waste management mechanism.
- To develop rainwater harvesting unit.
- To undertake tree plantation drive.
- To take additional measures to continuously improve our energy consumption.
- To ensure the availability of necessary resources to achieve our objectives.

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- To encourage use of advanced technology to minimize energy consumption, atmospheric emissions and noise, particularly from our vehicle fleets.
- To monitor and respond to emerging environmental and energy issues.
- To strengthen the awareness of energy conservation among the students and teachers.
- To provide information and training opportunities on energy saving measures.
- To offer opportunities for employees and students to engage in initiatives those contribute to environmental protection.

Scope of the policy

The scope of the energy conservation policy at Swarnnim Startup and Innovation University encompasses all aspects of energy usage and management within the institution. This includes but is not limited to:

- **Facilities:** Energy conservation efforts will be applied to all buildings, facilities, and infrastructure owned and operated by the college, including classrooms, laboratories, offices, dormitories, and recreational spaces.
- **Operations:** The policy extends to all operational activities that consume energy, such as heating, ventilation, air conditioning (HVAC) systems, lighting, water heating, and electrical appliances.
- **Transportation:** Efforts to conserve energy will also include transportation-related activities, such as optimizing fuel usage for college vehicles, promoting carpooling, and incentivizing the use of public transportation or alternative modes of transportation.
- **Procurement:** The policy will influence procurement decisions to prioritize energy efficient products and equipment, as well as environmentally sustainable materials and technologies.
- **Education and Awareness:** The scope includes educational initiatives aimed at raising awareness about energy conservation among students, faculty, staff, and the wider community, fostering a culture of sustainability.
- **Monitoring and Reporting:** The policy encompasses systems for monitoring and reporting energy consumption, performance metrics, and progress towards energy conservation goals.

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- **Compliance and Regulations:** The scope extends to ensuring compliance with relevant energy conservation regulations, standards, and best practices, as well as striving to exceed compliance requirements where feasible. By addressing these various aspects comprehensively, the energy conservation policy at Swarnim Startup and Innovation University aims to create a holistic approach to energy management that reduces environmental impact, promotes resource efficiency, and cultivates a culture of sustainability throughout the institution.

Policy formation

The Advisory Board for Energy Conservation Policy, under the dynamic leadership of its Principal serving as Chairman, comprises a diverse array of stakeholders committed to fostering sustainable practices within our institution. Led by the Principal, the board includes the IQAC Coordinator, Natural Club Coordinator, NSS Program Officers, and members of the Criteria seven team, ensuring representation from various facets of the institution. Furthermore, the inclusion of two outside experts, nominated by the Principal, brings valuable external perspectives to the table, enriching the discourse and decision-making processes. Together, this multidisciplinary assembly collaborates to develop and implement robust energy conservation policies, fostering a culture of environmental stewardship and responsibility within the institution and beyond.

Conclusion

The energy conservation policy at Swarnim Startup and Innovation University stands as a testament to our unwavering commitment to sustainability and responsible stewardship of resources. Through a comprehensive approach encompassing facilities, operations, transportation, procurement, education, and compliance, we pledge to reduce energy consumption, minimize our carbon footprint, and foster a culture of environmental awareness and responsibility within our institution and beyond. By embracing energy-efficient practices, leveraging renewable energy sources, and engaging stakeholders in collaborative efforts, we strive to create a greener, more sustainable future for generations to come, embodying our dedication to excellence in education and environmental leadership.

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Swarnim Startup and Innovation University is committed to maximize energy conservation procedures through various measures.

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B. ALTERNATE SOURCES OF ENERGY AND MEASURES TAKEN FOR ENERGY CONSERVATION

The list of facilities at the University are as below:

- 1) Solar Energy
- 2) Biogas Plant
- 3) Wheeling to the Grid
- 4) Use of LED bulbs/Power Efficient Equipment
- 5) Any other clean green energy

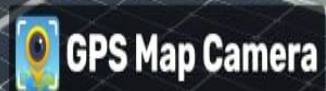
Features:

1. Grid connected Solar Plant
2. 100% Power Backup –Generators and Solar Plant
3. LED Light fixtures.
4. Effective peak load management
5. Repair, Re-use and frequent maintenance of equipment to ensure sustainable longevity.
6. Effective maintenances through annual maintenance.

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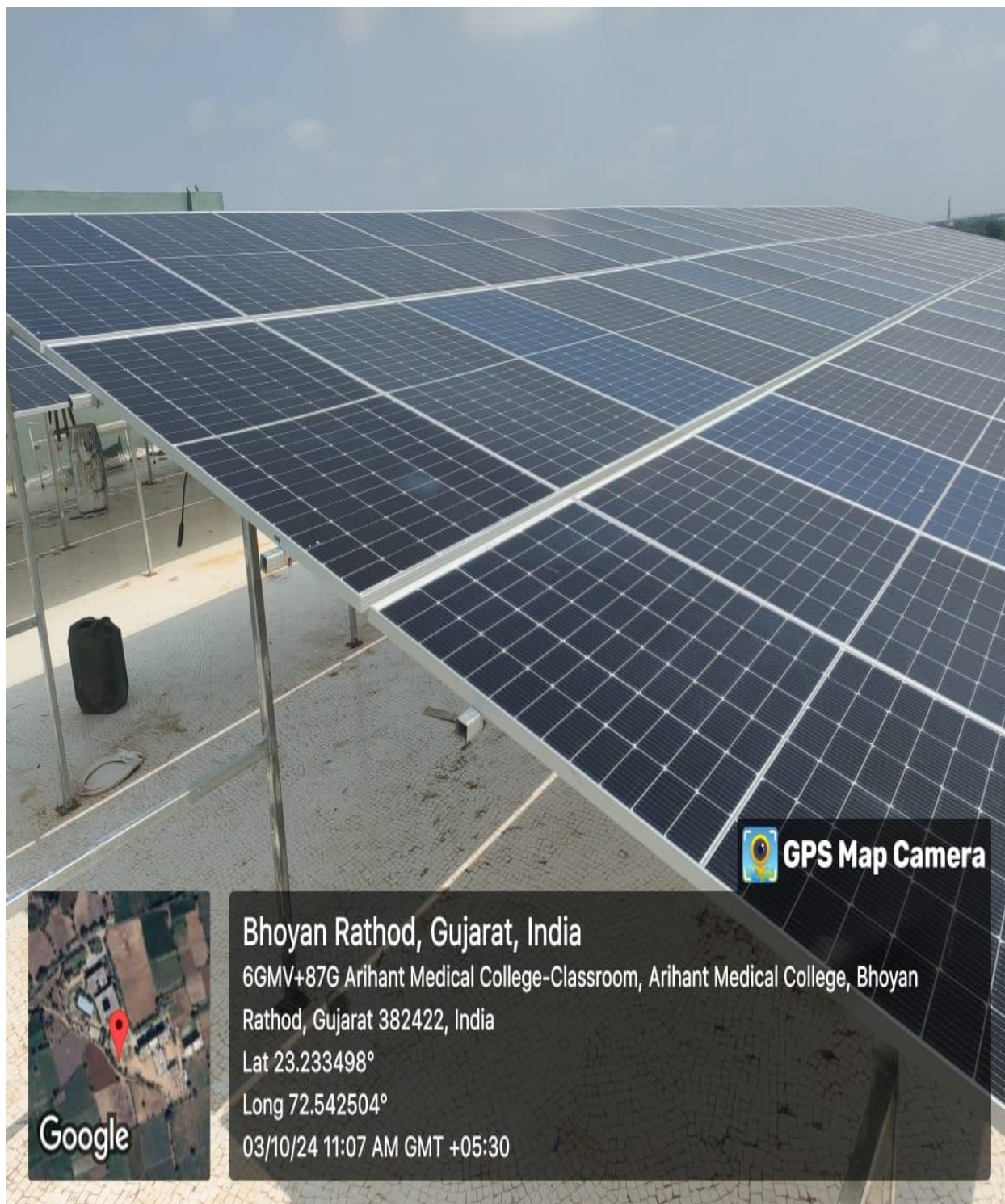


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Photos of Solar panels on the roofs of Ayurveda building



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Photos of Solar panels on the roofs of Ayurveda building

2) BIOGAS PLANT NEAR ANNAPURNA MESS

Overview

There are regular waste disposal problems in almost all Institutions like hostels, hospitals, convents, old age-homes, etc. where more peoples are staying together. In the same time the cooking fuel consumption of these Institutions is also very high. Fairly large quantities of firewood and other cooking fuels are consumed for routine cooking purposes.

Biogas production kills two birds with one stone: It reduces waste and produces energy. In addition, the residues from the digestion process can be used as high quality fertilizer. This closes the nutrient cycle. By understanding the today's need of saving of energy, Swarnnim startup and Innovation University **taken an initiative & sets up Bio-Gas plant to process canteen waste.**

Details

Swarnnim startup and Innovation University has installed a **biogas plant**, commissioned by Thermax Ltd **that has a capacity to generate energy equivalent** Plant, set up over nearly 450 square ft. The plant has been installed at a cost of around Rs. 3 lakhs.

The canteen caters to more than 1,000 students daily and generates over 50 kg of solid and semi-solid waste, in the form of left-over food and remains of vegetables and fruits. It was a tedious task to pack the huge amount of waste in polythene bags and hand them over to the civic body almost daily. It is now easy to dump this waste & processed at the biogas plant after some segregation. From it, Swarnnim startup and Innovation University is getting nearly 50 kg of biogas and it is also clean and efficient.

The biogas plant aims at addressing the issue of disposal of waste from the canteen and other parts of the campus in an eco-friendly manner. Registrar sir & Chemical and Environment department faculty, who was present during the commissioning of the biogas plant, has appealed to large educational institutes having a sizeable

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presence of on-campus students to opt for renewable energy methods for a safe and secure



Photo of Bio Gas Plant

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3) WHEELING TO GRID

A. Wheeling to the Grid Wheeling is the transportation of electrical energy from an electrical grid to another electrical load outside the grid boundaries. Wheeling often refers to the scheduling of the energy transfer from one balancing authority to another.

There are two types of wheeling:

- i) A wheel-through, where the electrical power generation and the load both are outside the boundaries of the transmission system and
- ii) A wheel-out, where the generation resource is inside the boundaries of the transmission system but the load is outside.



Photos of Wheeling of Grid

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Photos of Wheeling of Grid

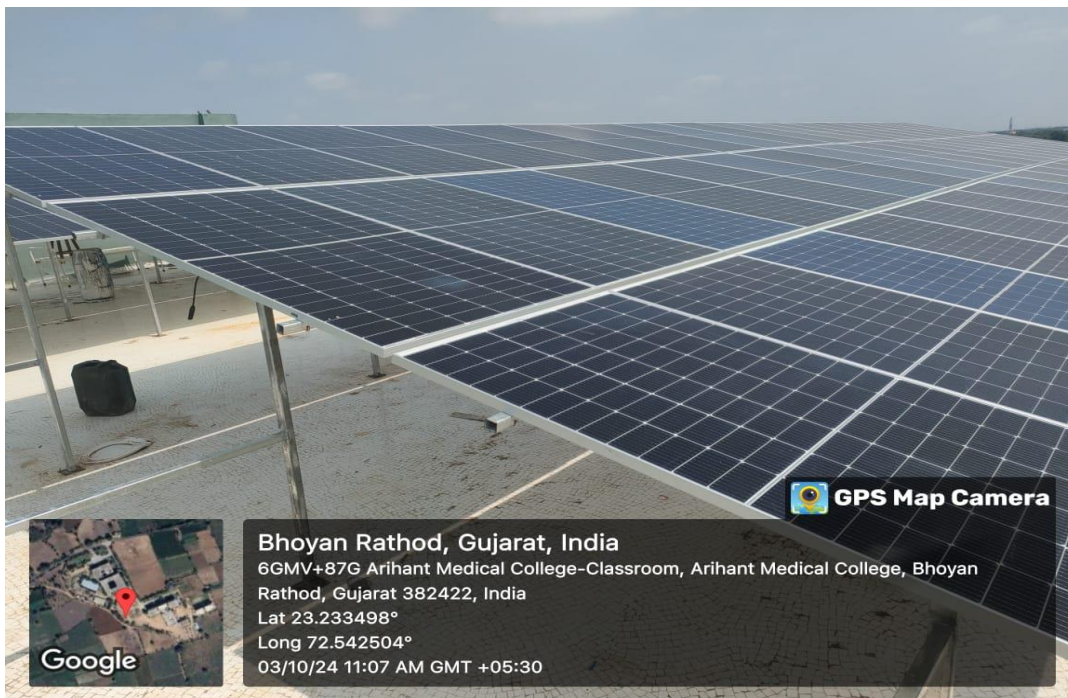
B. Solar Energy Project- Institute has installed 61.56 KW Solar Roof Top PV Plant as a clean energy project to make the campus eco-friendly. The project has been successfully installed and generating power which is more than energy requirement of the campus. The surplus power is export to MSEDCL (98496 KW/ year).

- Effective utilization of natural sunlight in the campus.
- Using solar water heater at hostels. (capacity 41000 Liters per day)
- Use of Solar street lights in the campus.

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4) USE OF LED BULBS/POWER EFFICIENT EQUIPMENTS

A LED lamp is an item for consumption that uses a Light-emitting diode and that is assembled into a street lamp or a light bulb. LED lamps last much longer, and are more efficient than luminous lamps. Unlike luminous lamps, most LED lamps do not need to "warm up" before they emit the full quantity of light in our everyday life. By replacing 40 watt florescent tube by 9 watt LED tube or 14 watt T-Bulb we can save approximately Rs.1000 per year. LED lighting fixtures are more beneficial for saving energy and to conserving the environment. These lighting solutions help a lot in maintaining campus security, providing better quality light, improving student safety, and giving facility managers a sense of peace that comes with purchasing long-lasting products. LED light bulbs last much longer and consume far less energy. The high efficiency and directional nature of LEDs makes them ideal for many uses. LEDs are increasingly common in street lights, parking garage lighting, walkway and other outdoor area lighting, refrigerated case lighting, modular lighting, and task lighting. Natural light is the best and most important light to incorporate in the classroom. Natural sunlight provides physical and physiological benefits to both students and teachers alike. The truth is that LED lights are directional, which means that they are excellent for use as reading lights. The electric light bulb has been called the most important invention since man-made fire. The light bulb helped to establish social order after sundown, extended the workday well into the night, and allowed us to navigate and travel safely in the dark. Without the light bulb, there would be no nightlife. As solid-state light sources, LEDs have very long lifetimes and are generally very vigorous. The main reason that LEDs use so much less electricity than incandescent lighting is that they don't produce light in the same way. This process doesn't use a filament and creates little heat, instead relying on a property of semiconductors to generate light. LED lights are up to 80% more efficient than traditional lighting such as fluorescent and incandescent lights. 95% of the energy in LEDs is converted into light and only 5% is wasted as heat. Less energy use reduces the demand from power plants and decreases greenhouse gas emissions. LED tubes are much more efficient on your energy costs as well as your carbon footprint on the environment. There's nothing more sustainable than Energy.

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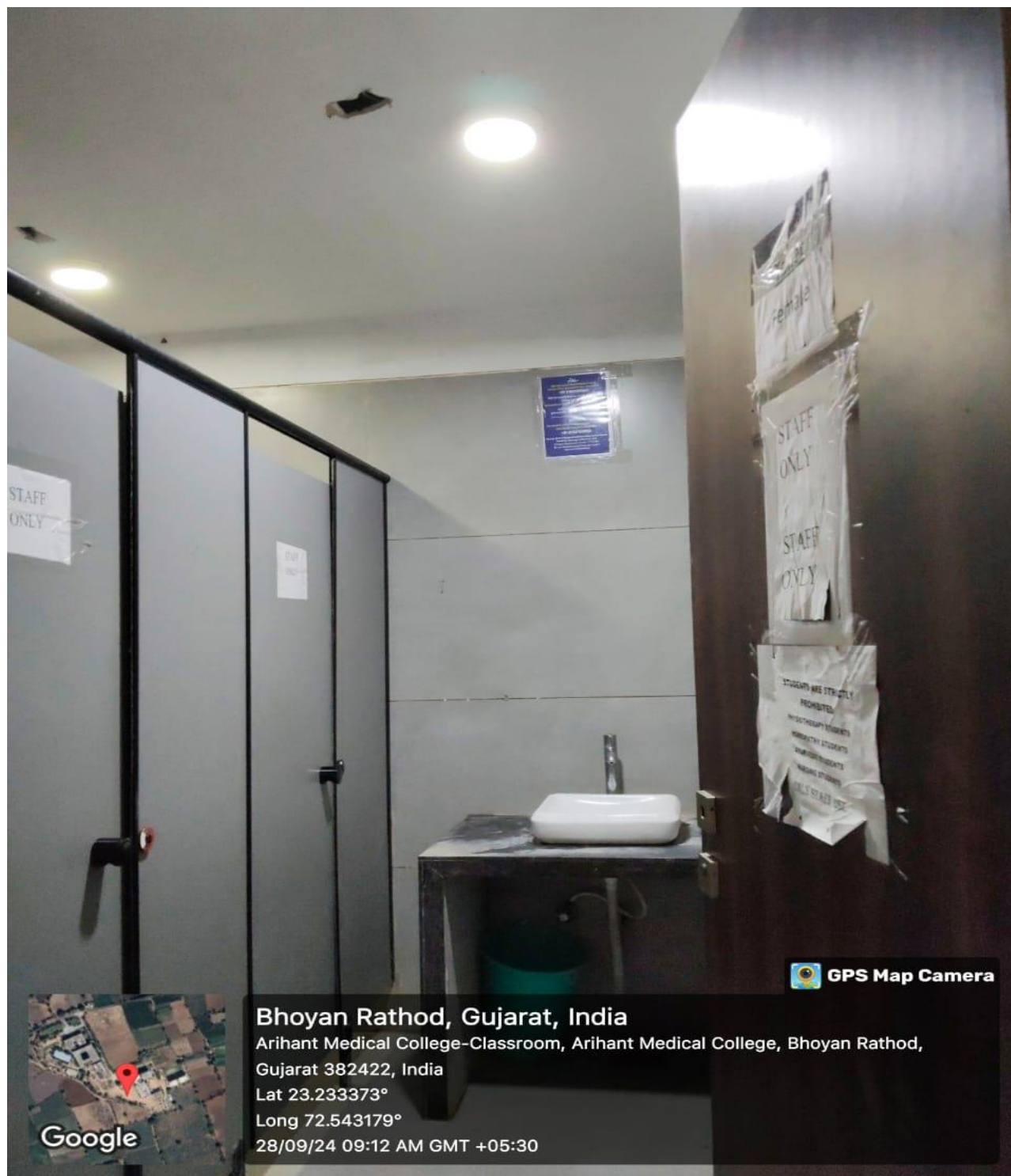




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Installed LED bulbs at Washrooms

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5) Other clean energy

Battery-powered e-rickshaws are a clean energy alternative to and college students have been involved in their development.



Battery E - Rickshaw

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Battery Urben scooter

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Battery tricycle

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Battery Bicycle

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