

RAIPUR INSTITUTE OF TECHNOLOGY

(Under the aegis of Mahanadi Education Society)

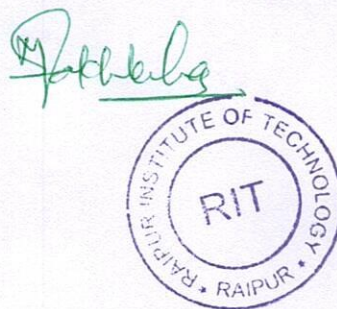
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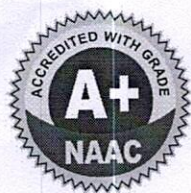


7.1.2 The Institution has facilities for alternate sources of energy and energy conservation measures

1. Solar Energy
2. Biogas Plant
3. Wheeling to the Grid
4. Sensor-based energy conservation
5. Use of LED bulbs / power efficient equipment

Response: A. 4 or All of the above





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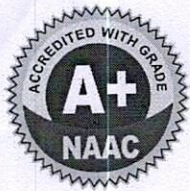


7.1.2 The Institution has facilities for alternate sources of energy and energy conservation measures

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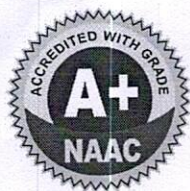
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Certificate of Head of Institution



Campus: NH-6, Chhatauna, Mandir Hasaud, Raipur (C.G.) - 492101 Ph.9522173000, 9522174000, Website: www.rit.edu.in
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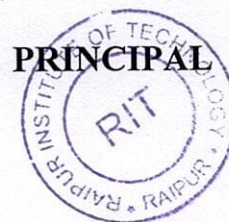
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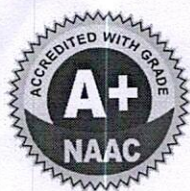


14-06-2024

To Whom So Ever It May Concern

This is to confirm that the Institution uses the facilities for alternate sources of energy and energy conservation measures such as Solar Energy, Biogas plant, Sensor Based Energy Conservation, & the uses of LED Bulb/Power Efficient Equipment.





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ENERGY CONSERVATION POLICY

Preamble:

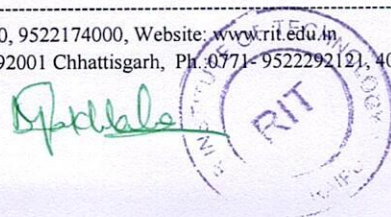
Energy plays an important role in the development of nation as well as organization. Out of various costs, energy cost is one of the major one. Energy intensity of our country is 3.7 times of Japan, 1.55 times of USA, 1.47 times of Asia and 1.5 times of world average. Energy intensity indicates development stage of a country and efficiency of energy use. Our country is not energy secure country and energy requirement is met through import of coal and petroleum products. Around 70% of country's energy requirement is met through electricity generation using thermal power plants. Use of fossil fuels lead to environmental pollution. Energy conservation 2001 was enacted to improve energy efficiency and reduce energy intensity. For sustainable development, it is necessary to provide focus on energy, environment and ecology. Energy management is judicious and effective use of energy without curtailing requirement to maximize profit and minimize environmental degradation. There is substantial potential to conserve energy by implementation of energy management program in all sectors of economy. Energy conservation awareness at all level is important to engage, involve all stakeholders in energy management program. Engineering colleges play significant role in creating awareness about energy management program among engineering students, schools and society and guide industry in the area of energy management. Energy audit is one of the important tool to identify energy conservation potential. Energy audit would give positive orientation about energy cost reduction. Energy audit is translation of energy conservation into realities taking into consideration techno commercial aspects.

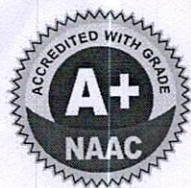
INTRODUCTION

RIT is one of the leading engineering institution offering engineering education at UG, PG and PhD level plays an important role in development of economy by providing quality engineering professionals.

Our Mission:

- Our mission is to minimize energy consumption by using energy efficient equipment and maximum use of sunlight, natural ventilation and energy substitution.
- Maximize use of renewable energy.
- Create awareness about energy conservation.





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This we plan to achieve:

- Manage efficiently utilization of energy resources by use of cleaner and more efficient technologies.
- Train the faculties, students and staffs to make Institute the pace setter in the field of energy conservation.
- Promote awareness related to energy conservation.
- Carry out regular internal energy audit to identify energy conservation opportunities.
- To ensure maximum utilization of solar energy in the campus.
- To phase out conventional light sources and replace them by LED's.
- Follow steps for energy efficiency, i.e. reduce, reuse and recycle wherever possible.
- To conduct webinars seminars and conferences on issues related to environment and energy conservation.

Objective of Energy Management:

- Improvement in energy efficiency to reduce energy consumption and cost.
- Eliminate wastage by use of good practices.
- Minimize environmental degradation.
- To ensure conservation of energy in the campus.
- To use sustainable sources of energy.
-

Energy Management Principles:

- Procure energy at lowest cost.
- Use energy at highest possible efficiency.
- Use of low investment technologies.
- Reduce, reuse and recycle.
- Use of renewable energy.





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Types and Use of Energy:

S. No.	Type of Energy	Energy Usage
1.	Electrical Energy	Indoor and outdoor illumination Ventilation Air conditioning Water pumping Computer labs Laboratory equipment Workshop equipment
2.	LPG	Mess and canteen for food preparation Laboratory experiment
3.	Solar Energy	Wheeling to the grid

Electrical Supply System:

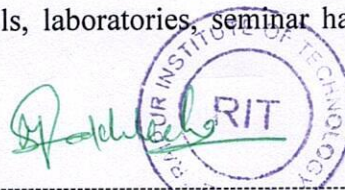
Electrical supply to campus is through CSPDCL. Electrical supply is distributed to various blocks of the campus adequately to avoid mechanical damage.

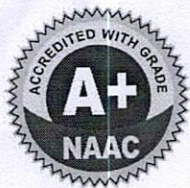
Backup Power Supply:

Backup supply arrangement is provided to the entire campus by installation of Diesel Generator .

Save Energy Tips for Students and Staffs:

- Unplug all appliances when not in use
- Use LED
- Whenever possible, shut down the system rather than logging off
- Turn off unnecessary lights and use daylight instead
- Switch off the lights and fans in classrooms, lecture halls, laboratories, seminar halls when not in use
- Use air conditioner only when needed





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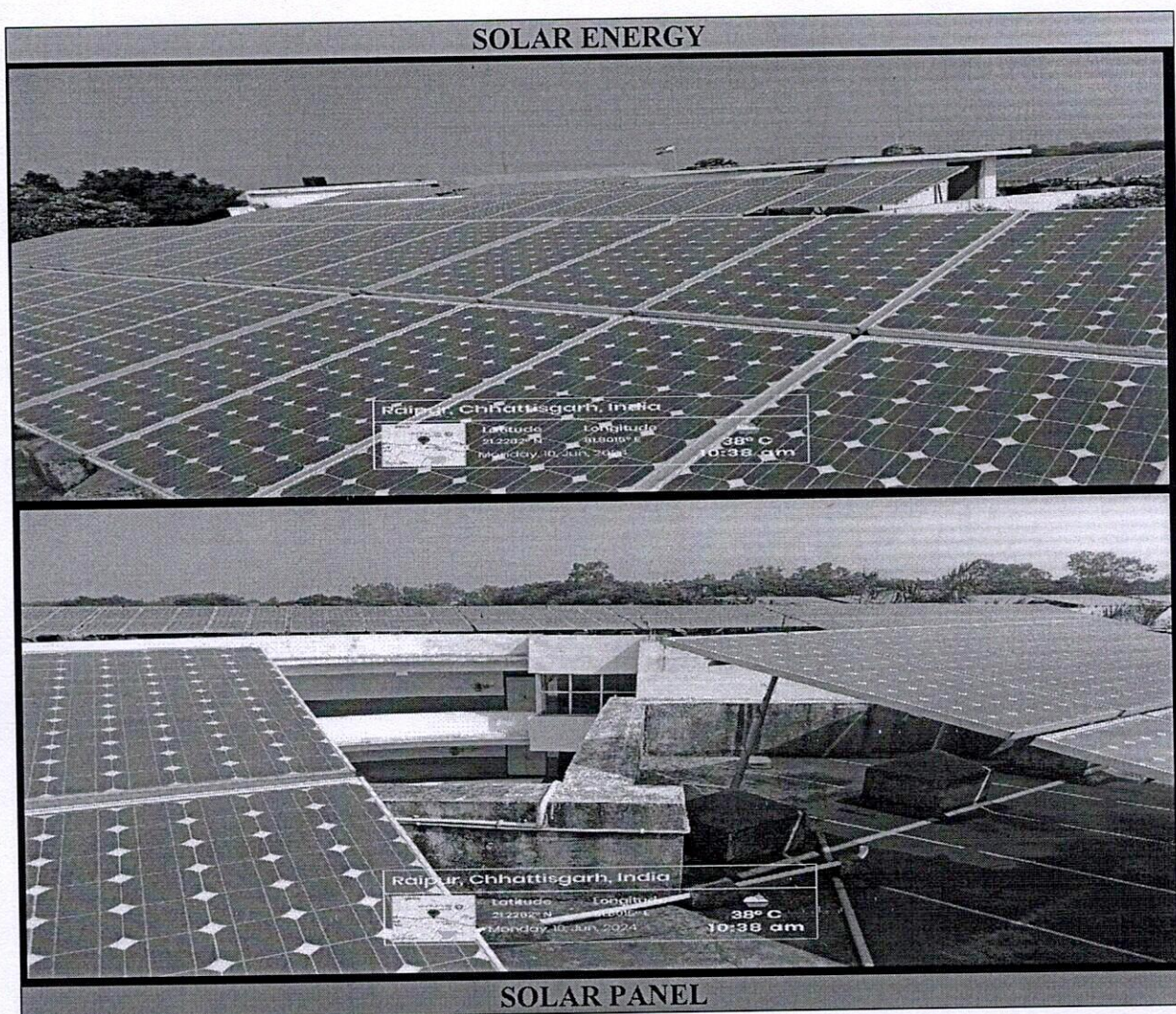
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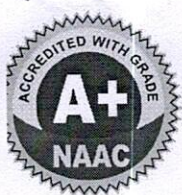


SOLAR ENERGY

The roof of entire campus of RIT is covered with solar panels. It is being used as an alternate source of energy. When the sun shines onto a solar panel, energy from the sunlight is absorbed from the PV cells in the panel. This energy creates electrical and charges that move in response to an internal electrical field in the cell, causing electricity to flow.



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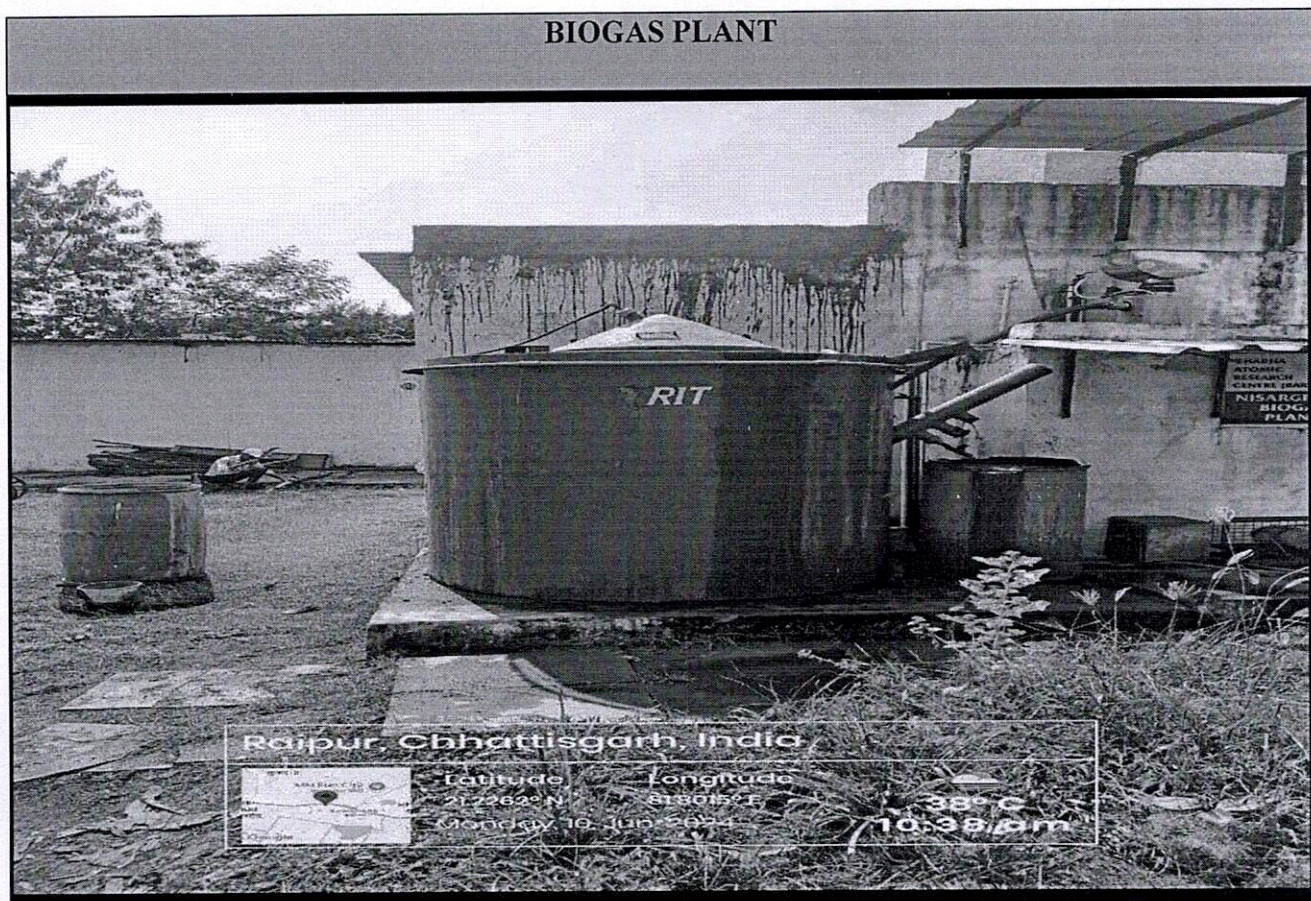


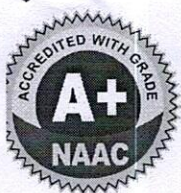
BIOGAS PLANT

Biogas plant has been setup in the RIT campus as it is considered to be a renewable resource as it has a continuous production and use cycle.

Volume of the Digester: 40.72 m³

Demonstration: 50 kg/day





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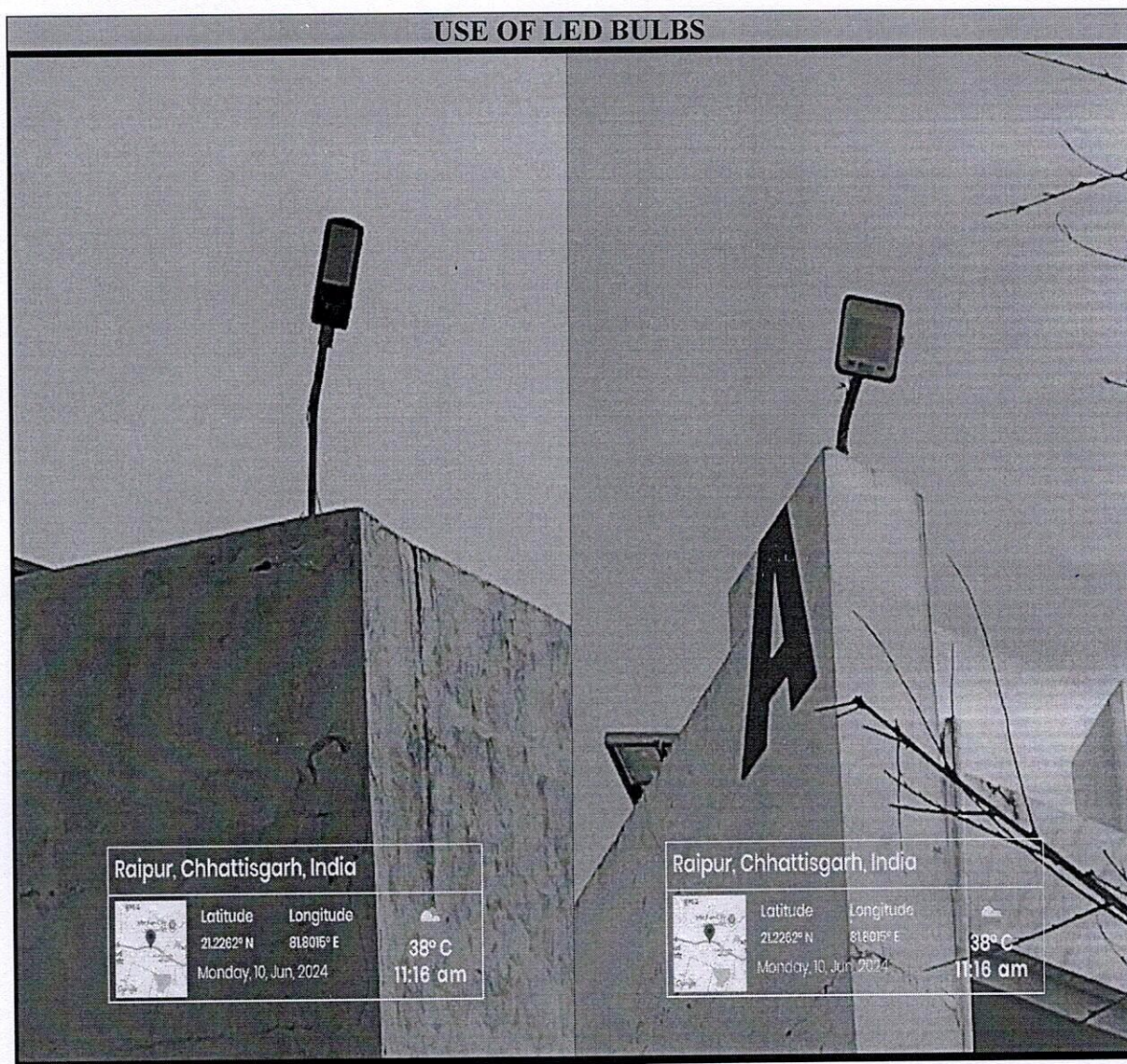
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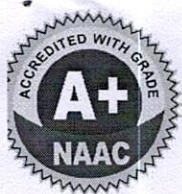
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USE OF LED BULBS

The campus of RIT has LED bulbs installed in most of the places as LED's use less electricity than other lighting options and also they do not require a disposal program often associated with fluorescent bulbs.





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WHEELING TO THE GRID

The RIT campus has alternate source of energy, "Wheeling" meant the operation whereby the distribution system and associated facilities offer transmission or distribution were being used by another person for the conveyance of electricity on payment of charges.

