



**SREE
NARAYANA
COLLEGE
KOLLAM**

POLICY DOCUMENT: ALTERNATE SOURCES OF ENERGY AND ENERGY CONSERVATION MEASURES

The environment and energy usage policy of Sree Narayana College, Kollam includes guidelines and regulations for reducing energy consumption and environmental impact within the campus. The policy also includes goals for increasing the use of renewable energy sources. Additionally, our policy incorporates educational inputs for students, staff, and faculty to raise awareness about the importance of sustainability and conservation. Several alternative sources of energy are used in our campus to reduce our dependence on fossil fuels and decrease our carbon footprint. The major energy conservation measures adopted in our campus include:

- One 9.9kWp On-Grid Solar Power Plant
- One Aerobic Composting Unit
- One biogas plant
- One Incinerator 650 CFL Bulbs and Tubes
- Rainwater Harvesting Unit (20,000 L)
- Efficient Electrical Circuits
- Effective Water Storage Facilities

1. Solar energy: Harnessing the power of the sun through the use of solar panels.

Our college has long embraced a green philosophy and the institution facilitates resources for energy conservation.

- The solar power plant installed in our college lowers the college's energy costs by producing electricity on-site.
- A 9.9kWp solar power unit has been installed in the campus.
- The main building depends on the solar power generated from the unit for the energy requirements.
- 20 solar panels are installed in our campus. The average energy produced is 40 units per day. The amount of electricity usage in the main building has decreased owing to the installation of solar panels.
- As per the agreement with the KSEB, additional electricity generated is sold back to the grid and it in turn serves as an additional income.

2. Aerobic composting unit:

An aerobic composting unit is a device or system used to break down organic materials through the process of aerobic digestion. This process relies on the presence of oxygen to support the growth of microorganisms that breakdown the organic matter.

- An aerobic compost unit that houses 1m³ capacity has been installed in the campus.
- It reduces the amount of organic waste that goes to landfills, which in turn helps to reduce greenhouse gas emissions within the campus.
- The nutrient-rich compost is used as a fertilizer for campus gardens, landscaping and our agricultural project - “Harithakeralam”.
- It also provides an educational opportunity for students to learn about sustainable waste management and composting.

3. Biogas plant

A biogas plant converts organic matter, such as agricultural waste or sewage, into a form of clean energy known as biogas. This is achieved through the process of anaerobic digestion, which takes place in the absence of oxygen.

- The biogas plant, uses biogas as a cost-effective and sustainable solution in our campus that converts organic waste such as food scraps from canteen and agricultural waste into renewable energy forms.
- It creates a source of energy that is used on-campus, and helps to lower the college's energy costs, cooking expenditure of canteen and manage biodegradable waste.

4. Incinerator

In an attempt to promote cleanliness and protect the environment, incinerator is made operational in the college.

- The incinerators help in scientific disposal of the used sanitary napkins.
- The incinerator is installed in the women's toilet block.

5. LED Lights

- An LED bulb manufacturing unit functions in our college under the aegis of the Department of Physics.
- The unit imparts training to students on the manufacturing, maintenance and sale of LED bulbs.
- The use of LED lights in the college campus provides significant energy savings and environmental benefits, improves the lighting quality, and helps to create a safer and more comfortable environment for students, staff, and visitors.
- LED lights are installed in various areas of the campus such as buildings, parking lots, walkways, and sports fields.
- They can also be used for outdoor lighting and for lighting up specific landmarks or features on the campus.

6. Rainwater harvesting

Rainwater harvesting is a cost-effective and sustainable way to conserve water and reduce the campus's impact on the environment.

- Our campus has a rain water harvesting unit with the capacity of 20,000L, where rain water is being collected during the rainy seasons.
- It helps to recharge/replenish the well that provides the campus with abundant water supply throughout the year.
- Rainwater harvesting pits or percolation pits are installed in our campus as part of environment conservation, inspired from the concepts of green campus initiatives.
- This percolation pit is one of the easiest and most effective means of harvesting rainwater.
- Regular maintenance and cleaning is ensured for its proper working and safety.
- Harvesting and reusing rainwater helps to reduce the campus's impact on the environment by reducing the amount of water that is taken from rivers, lakes, and aquifers.
- Rainwater harvesting also helps to lower the campus's water bill and maintenance costs.