

8. Soil Pollution Management:

A. Rainwater harvesting:

Our university is having rainwater harvesting system to conserve the rainwater. The earth water level is increased which helped to have water to our university hand pump /boar. It increases natural storage of water and helps the University in getting water for various purposes. We have 30 running meter pipeline use for this purpose. The total 2899.40 sq. Meter are roof water is collected through this system.

Rainwater Harvesting: Structure and Utility:

> Introduction

As the scarcity of water is rapidly increasing everyday particularly during the summer season, the demand for water in the University campus also substantially increased. Therefore, university has installed three rooftops rain water harvesting systems in the university campus.

> Design of proposed catchment area:

The catchment of water harvesting system is the rooftop that receives rainfall directly and drains the water system. The existing roof is made use of to collect rainwater. Therefore, the rooftop is swept and cleaned regularly for collecting the water to its maximum purity.

From the design of the terrace floor, we calculated total rooftop area of our university.

System-1: Area of the Exl. of Library = 429.58 sqm ✓
 System-2: Area of the rooftop of Exl. Computer Science Dept. = 573.82 sqm ✓
 System-3: Area of the rooftop of Lab 3 = 1896.00 sqm ✓
 Total Area is = 2899.40 sqm ✓

Total area of proposed catchment

> Design of transportation system:

For transporting the rainwater from the catchment area in this project we have used Polyvinyl chloride (PVC) pipes and fittings. For the collection purpose, we are using pipes ranging 4" φ and 5" φ inches diameter. A care has been taken that the first spell of rain is flushed out and does not enter the system. This is done since the first spell of rain carries a relatively larger number of pollutants from the air and catchment surface. The water is transferred to the special kind of filters which removes the leaves, dust, small twigs and other organic matter.

In case of system 1, filtered water is then allowed to flow into the bore well near Ramamujan Hostel

In case of system 2, filtered water is transferred into the bore well in the in front of Computer Sc. Lab and

In case of system-3 rainwater from 2nd Top is transferred into bore which is in front of Library

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5. Use of LED Bulbs/power efficient equipment

LED bulbs are provided in the campus. Details about percentage of power requirements met through LED bulbs

Session	Total Lighting requirements Lacs Unit	Percentage Lighting through LED bulbs	Percentage Lighting through other sources
2016-2017	8.87	30.00%	70.00%
2017-2018	8.56	49.50%	50.50%
2018-2019	7.24	54.00%	46.00%
2019-2020	7.01	56.01%	43.09%
2020-2021	3.29	73.56%	26.44%
2021-2022	2.97	60.49%	18.51%

Facilities for alternate sources of energy and energy conservation measures

Session	Solar Energy (Lacs Unit)	Wheeling to grid In excess of self use	Sensor based energy Conservation
2016-2017	0.08	0.00	-
2017-2018	0.79	0.00	-
2018-2019	3.25	0.00	In Street Lights
2019-2020	5.68	0.70	In Street Lights
2020-2021	5.89	0.77	In Street Lights
2021-2022	5.93	1.93	In Street Lights

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Criteria VII

7.1.2 The institute has taken various measures for energy conservation/ use of renewable energy in the campus. Some of the important measures taken by the university are given below.

1. Use of LED bulbs are regularly promoted in the campus. High mask solar lights, Solar streetlights (sensor based) are being used in the campus currently as energy efficient lighting option.
2. All lights/fans in the classrooms/ labs are kept in switch off mode when they are not in use. Minimal consumption of energy is the saving factor of energy conservation in the campus.
3. Open air auditorium is used to conduct university level events like Annual day, orientation Day etc.
4. A solar power plant of capacity 550 KW has been installed in the campus.

1. Solar energy

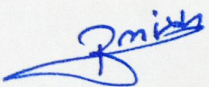
550 KW solar powers is generated and connected to the State Electricity Grid. The University is saving 25.96% of its electricity bill annually through this solar power generation installed in the campus.

3. Wheeling to grid

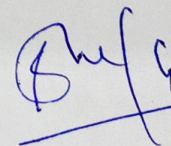
Institute has surplus generation during daytime from solar system and well connected to the grid. Thus, the surplus generation is wheeled to the grid through net metering system

4. Sensor-based energy conversation

All the streetlights in the university campus are sensor-based energy conversion; hence loss of power has been controlled effectively. All the streetlights in the campus are fully automated.



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