



ENVIRONMENTAL AUDIT

Yogi Vemana University, YSR Kadapa
Report - 2018-19



Prepared by

LEE SHREYUS FOUNDATION
Hyderabad

ENVIRONMENTAL REPORT
Yogi Vemana University, YSR Kadapa
2018-19

ISBN: 978-93-91365-46-2

Year of Publication: 2021

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ACKNOWLEDGEMENT

We thank Yogi Vemana University for allowing us to conduct Environmental Audit of the campus. Our special thanks to the following officials of the university for supporting us in preparing this report:

1. Chancellor - His Excellency Sri Biswabhusan Harichandan
Governor of Andhra Pradesh
2. Vice-Chancellor - Prof. Attipalli Ramachandra Reddy
Honourable Vice-Chancellor,
Yogi Vemana University
3. Principal - Prof. G. Gulam Tariq
4. Registrar - Prof. K. Chandraiah
5. Director, IQAC - Dr. M. V. Shankar
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7. Member, IQAC - Dr. M. Anitha
8. Member, IQAC - Dr. P. Vasu Govardhan reddy
9. Member, IQAC - Dr. R.V. Jayanth Kasyap

PREFACE

Environmental pollution has been increasing and natural resources are decreasing in a fast pace. This has become concern at global level and every country has its own rules and regulation to reduce the pollution. Here there is a need to adopt new eco-friendly technologies and behaviour change communication in the young generation. Therefore, it is responsibility of everyone to contribute to this effort. Education Institutions can do natural resources conservation at large scale and demonstrate the same to the students and people living in the surrounding areas of the campuses.

Environmental Audit would provide current scenario and one can build strategy plan for eco-friendly campus. This also provides opportunity for the students to understand sustainable development and importance of environment protection. Environmental Audit is the process of documenting the existing resource usage and recommend the required technologies and eco-friendly activities in the campus.

Yogi Vemana University has been conducting environmental audit process for continuous assessment of the impact of the activities and technologies adopted so far. We thank university for giving us opportunity to conduct Environmental Audit of the campus.

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OVERVIEW

Healthy environment aids effective learning and provides a conducive learning environment. There are various efforts around the world to address environmental education issues. Environmental Management Systems (EMS) is very popular in the industrial sector, but the general belief is that EMS is something pertaining to industries only. Other parts of the world have started adopting compatible environmental management systems either voluntarily or for promoting standards by external certification. International environmental standards do not suit the existing Indian educational system. Hence EHS Alliance has developed a compatible system by developing locally-applicable techniques. A very simple indigenized system has been devised to monitor the environmental performance of educational institutions. It comes with a series of questions to be answered on a regular basis. Environmental conditions may be monitored from angles that are relevant to Indian requirements, without stress on legal issues or compliance. This innovative scheme is user-friendly and totally voluntary. The environmental monitoring system helps the institution to set environmental examples for the community and to educate young learners. It can be adapted to urban and / or rural situations.

Environmental management tool comprising systematic, documented, periodic and objective evaluation of how well environmental organization, management and equipment are performing with the aim of helping to safeguard the environment by facilitating management control of practices and assessing compliance with company policies, which would include regulatory requirements and standards applicable. These are used to help improve existing human activities, with the aim of reducing the adverse effects of these activities on the environment. An environmental auditor will study an organizations environmental effect in a systematic and documented manner and will produce an environmental report.

This study covers various aspects of environment as mentioned in the report. Auditing methods are chosen based on the type of information needed to prove the real-life problems assumed in the preliminary study and demonstrate the scale of

these problems. The data is collected verbally, visually and textually. After data collection, the result analysis is done on cost benefit, life cycle, comparative and regression analysis.

Objectives

- Environmental education through systematic environmental management approach
- Improving environmental standards
- Benchmarking for environmental protection initiatives
- Reduction in resource use
- Financial savings through a reduction in resource use
- Curriculum enrichment through practical experience
- Development of ownership, personal and social responsibility for the university campus and its environment
- Enhancement of university profile
- Developing an environmental ethic and value systems in young people

Methodology

An environmental audit is a snapshot in time, in which one assesses campus performance in complying with applicable environmental laws and regulations. Though a helpful benchmark, the audit almost immediately becomes outdated unless there is some mechanism in place to continue the effort of monitoring environmental compliance. This is very first environmental audit of institute for NACC Accreditation QS Programme and doing their bid towards environmental protection and environmental awareness at local and global front. Audit criterion is as follows -

- Environmental cognizance
- Waste minimization and management
- Biodiversity conservation
- Water conservation
- Energy conservation and
- Environmental legislative compliance by the campus.

A questionnaire is used during audit. This audit report contains observations and recommendations for improvement of environmental consciousness.

UNIVERSITY PROFILE

Named after a renowned saint - poet, thinker and philosopher Yogi Vemana, the University, established in the year 2006, by an Act of A.P state legislature is a blessing and boon for the students and researchers of the backward Rayalseema region in general and Y.S. R district in particular. The erstwhile Sri Venkateswara University Post Graduate Centre was elevated to a University with a humble and noble intention of providing a more conducive environment to impart value-based education and promote quality research and service. The university is committed to nurture and uphold healthy academic standards which contribute to the social, intellectual and moral development.

The university is situated about 15 kms away from the historic Kadapa City on the Kadapa -Pulivendula road amidst serene surroundings and has a sprawling campus of about 700 acres. With a humble beginning, the university made rapid strides towards overall development and has sufficient infrastructural facilities such as buildings with academic ambience, library, modern science and research laboratories equipped with sophisticated instruments, Super Computer facility, Agri-Science Park, spacious hostels, gym, daycare centre, Botanical Garden and a vast playground. Besides, a building complex was added for the purpose of conducting training short term vocational and job oriented courses on a continuous basis. At present the university has on its rolls 115 faculty members and about 200 non-teaching staff. The young faculty has rich research experience in India and abroad besides teaching. Presently about 1800 students are pursuing postgraduate and research programmes. Majority of the science faculty have obtained research projects from central funding agencies such as DST/ CSIR/DBT/MNRE / ISRO/UGC/MoES /BRNS /APCOST and considerable number of projects are under progress. The university was accorded 2 (f) recognition in 2007 and 12 (B) status in 2011 by the University Grants Commission, New Delhi. Presently it is an affiliating university with about 100 Post graduate, degree, law, B.Ed, MCA ,MBA and Physical Education colleges under its jurisdiction.

In the recent past, the university-initiated steps to launch women's cell, equal opportunities cell, a Day Care Center and coaching programmes for SC/ST/OBC/

minority students preparing for competitive examinations. The C.P Brown Library, now elevated to the status of a languages Research Center of the university, located in Kadapa town, has rare books, ancient documents and monographs and efforts are made to preserve and protect ancient literature.

In tune with the contemporary societal, scientific and technological needs the university with 27 departments is offering conventional and inter-disciplinary courses in basic and applied sciences, humanities, social sciences and management. The university launched two five year M.Sc integrated courses, namely Earth Sciences and Biotechnology & Bio-Informatics in 2007. The University also started research programmes leading to PhD in the year 2010 and currently about 170 research scholars are pursuing research in 27 different Departments. To give a fillip to engineering education, the university in the year 2008 started YSR Engineering College in Proddutur, a major town in Y.S.R district and an industrial hub. Currently it is offering graduate courses in Engineering disciplines of Civil, Mechanical, Electrical & Electronics, Electronics & Communication, Computer Science and Metallurgy & Materials Technology, and about 850 students are on the rolls. The university will be holding its very FIRST CONVOCATION on 5th November 2012, About 1000 PG students will be receiving their degrees and 30 among them will be receiving GOLD MEDALS sponsored by Donors.



UNIVERSITY BUILDING AREA

The building area indicates the constructed area of the campus. This will help in the resource usage as well. The following are the details of buildings:

SNo	Name of Building	Built Area (Sq.Mts)
1	Administrative Building, V.C & Registrar Chambers	310.94
2	Engineering Department	308.69
3	Science Block (Old)	1189.64
4	Arts Block (Old)	975.91
5	Men's Hostel (Old)	1200.59
6	Women's Hostel(Old) Temporary Sheds	499.38
7	Class Rooms (Old) Aero can Sheds -1	732.59
8	Aero can Sheds -2	261.30
9	Aero can Sheds -3	473.06
10	Canteen	228.81
11	Library (Old)	392.99
12	Sir. C.V.Raman Science Block	14104.52
13	Guest House	4112.12
14	Hostels (Boys & Girls)-8 Nos	16200.67
15	Dinning & Mess Blocks - 4 Nos	1633.20
16	Central Library	5979.46

ENERGY AUDIT

Energy audit would give a insight on the energy cost reduction, preventive maintenance and quality control which are very important utility activities. It will help to understand more about the ways energy utilized and help in identifying the areas where waste can occur and where scope for improvement exists.

Energy audit helps in energy cost optimization, pollution control, safety aspects and suggests the methods to improve the operating and maintenance practices of a campus. It is instrumental in coping with the situation of variation in energy cost availability, reliability of energy supply decision on appropriate energy mix, decision on using improved energy conservation equipment, instrumentations and technology. It is proven that energy saving about 15 to 30% is possible by optimizing use of energy efficient equipment at the time of replacements.

University has come up with energy efficient technologies like installation of Solar Power Plant and usage of LED Bulbs. They also have range of eco-friendly activities involving students of NSS and NGC.

University uses energy from:

- Electricity from APSSDC
- Solar Power Plant

Solar Power Plant at the roof top of capacity 450 KW was installed in the campus. This serves as renewable energy source for the campus energy requirement. On the other hand majority of the students use public transport i.e., RTC bus mode of transport thus creating less carbon footprint. Still few vehicles movement is found in the campus due to own vehicles used by faculty, students and visitors.

ENERGY CONSUMPTION

S.No	Item	Value
1	Total Annual Electricity Cost, Utilities + DG/GG Sets (Rs.)	8671984.78
2	Annual Electricity Consumption, purchased from Utilities (kWh)	1236288.90
3	Annual Electricity Consumption, through Diesel Generating (DG)/Gas Generating (GG) Set (s) (kWh)	138374.4
4	Total Annual Electricity Consumption, Utilities + DG/GG Sets (kWh)	1374663.3
5	Annual Electricity Cost, purchased from Utilities (Rs.)	8553484.78
6	Annual Electricity Cost generated through DG/GG Sets (Rs.)	118500(1500ltsx79) Approximate Value
7	Connected Load (kW) or Contract Demand (kVA)	500KVA
8	Peak Demand or Maximum Demand Indicated (MDI) (kW)	357.48
9	Installed capacity: DG/ GG Sets (kVA or kW)	400KVA
10	What is power factor (less than 1, 1 or above 1)	<1

Lab Equipment's Information

About 470 varieties of equipment are used in various labs of the university. Voltage ranging from 200 to 250 and having various watts. The equipment usage time period of these equipment is ranging from minimum 10 mins to 24 hrs. All the equipment run with solar power. Especially, Sir CV Raman Building has solar panels, where most of the labs located and high consumption of energy takes place.

Electronic Appliances Information

The following are the electrical appliances university use regularly:

SNo	Equipment	Wattage	Nos	No. of hours per day	Total no. of day (usage) in a month
1	Refrigerators	250/Each	40	24	30
2	Computers	250 / Each	140	8	26
3	Desktops	250/ Each	323	8	26
4	Laptops	50 / Each	120	5	26
5	Servers	800 /Each	2	24	30
6	Small printers	840/ Each	101	8Hrs	26
7	Printers/ Xerox	1750 / Each	21	8Hrs	26
8	Fax machine	30 /Each	2	10 mins	20
9	Scanners	10 / Each	10	10 mins	20
10	Projector	800 / Each	30	1Hr	7
11	Sound System	110 /Each	9	10Mins	1
12	Televisions	80 / Each	7	8Hrs	26
13	Air Coolers	230 / Each	15	1Hr	1
14	Kettles	1000 /Each	30	10Mins	26
15	Iron Boxes	1100 / Each	150	30Mins	26
16	Grinders	750 /Each	4	4Hrs	30
17	Water filters	25 /Each	6	1Hr	26
18	Water heaters (Immersion Rods)	4000/Each	50	15Mins	30
19	Any other(UPS)	10 KVA/Each 6 KVA/Each	4 18	10Hrs	30
20	R.O. Plant	3000 / Each	9	2	26

University Buildings Lighting Facilities

Sl. No	Type of lighting	Wattage	No. of fittings	No. of hours in a day	Total no. of days (usage)	Total wattage
1	LED	20	791	8	26	15820
2	LED	50	17	8	26	850
3	LED	60	1	8	26	60
4	LED	200	1	8	26	200
5	Fluorescent tube lights(FTL)	36	3545	8	26	127620
6	Compact fluorescent light(CFL)	18	1051	8	26	18918
7	False Ceiling 2X2	80	127	8	26	10160

Solar Power Plant (Renewable Energy Source)

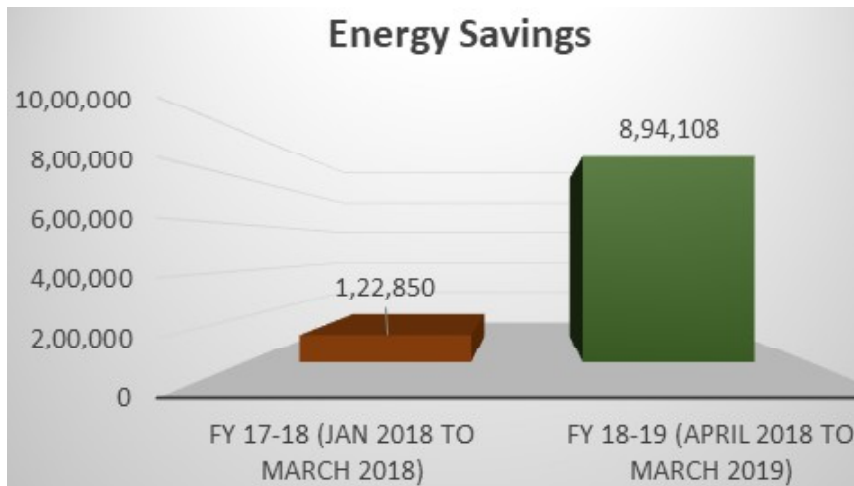
University has come up with Solar Plant to meet the total energy demand and make it "Green Campus" in partnership with DISCOM. This is on net metering basis. In view of the above, the area beside the campus allotted for the proposed plant earlier had plants that are planted under Social Forestry scheme. These plants were removed and replaced in other area.

Total 950 KW (4 units per KW)	
1. Rooftop	
• Admin	50 KW
• Library	100 KW
• Sir CV Raman Building	100 KW
2. Ground Mounted	700 KW
• Total number of inverters	19 (each inverter storage is 50 KW)
Peek Timing for generation of power	9.30 am to 3.30 pm



ENERGY SAVINGS

Period	Net Energy Cost savings, Rs.
FY 17-18 (Jan 2018 to March 2018)	1,22,850
FY 18-19 (April 2018 to March 2019)	8,94,108
Total	10,16,958

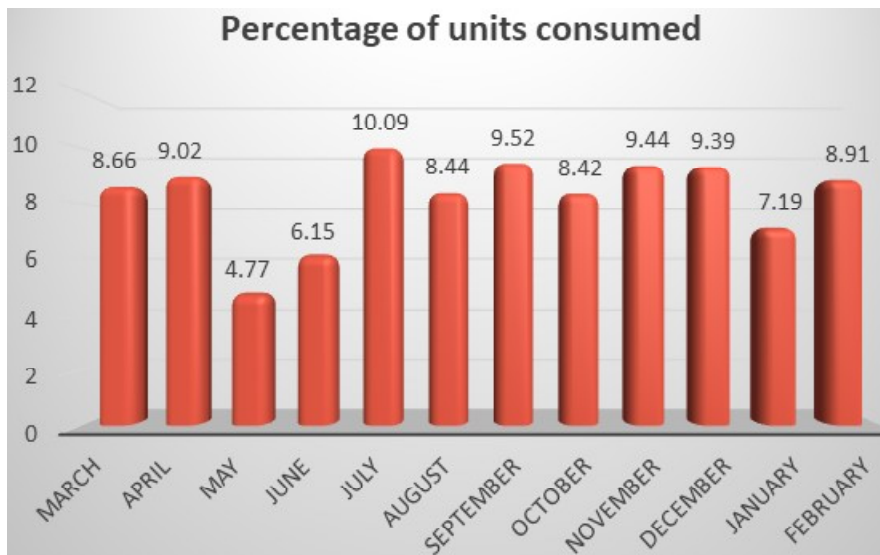


University is paying for the net energy in a billing month as per applicable retail supply tariff decided by regulatory commission of the concerned DISCOM, if the supplied energy by the DISCOM is more than the injected energy by the solar PV

sources of the university. Any excess/surplus energy injected in to DISCOM network in a billing month is being paid at APERC pooled cost that is year on year basis. Energy settlement is done in half yearly basis.

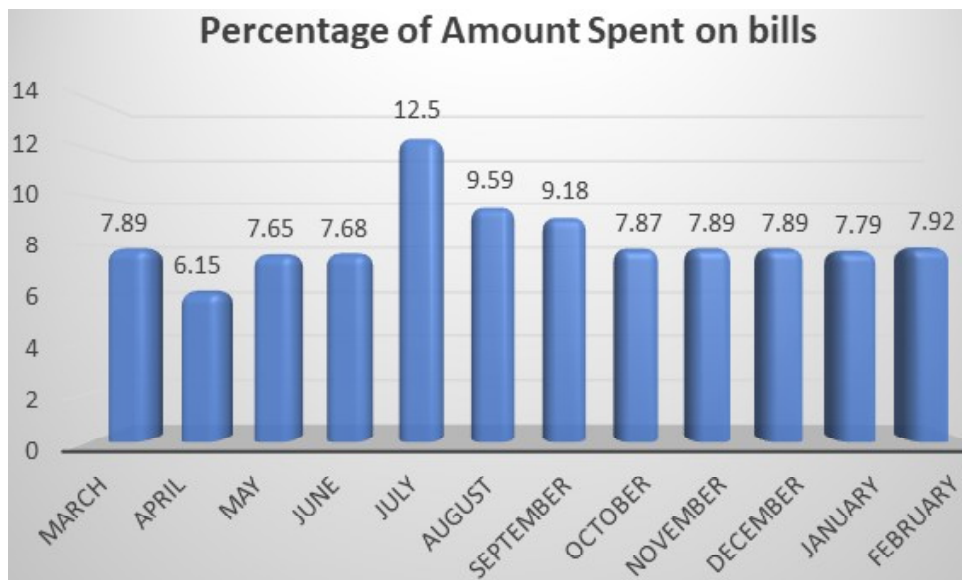
ELECTRICITY CONSUMPTION

Month	Units	Percentage of units consumed
March 18'	52327.5	8.66
April 18'	54480	9.02
May 18'	28815	4.77
June 18'	37177.5	6.15
July 18'	60952	10.09
August 18'	50955	8.44
September 18'	57510	9.52
October 18'	50850	8.42
November 18'	57030	9.44
December 18'	56730	9.39
January 19'	43425	7.19
February 19'	53820	8.91
	604072	



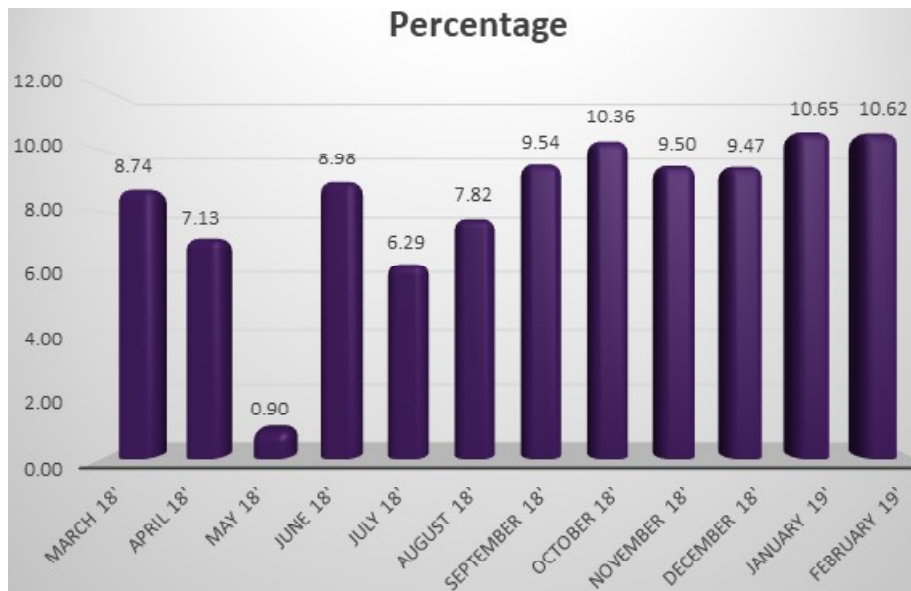
BILL AMOUNT ON ELECTRICITY

Month	Amount	Percentage of Amount Spent on bills
March 18'	285585	7.89
April 18'	222506	6.15
May 18'	277039	7.65
June 18'	277897	7.68
July 18'	452501	12.5
August 18'	347196	9.59
September 18'	332368	9.18
October 18'	285013	7.87
November 18'	285638	7.89
December 18'	285748	7.89
January 19'	281984	7.79
February 19'	286588	7.92
	3620063	



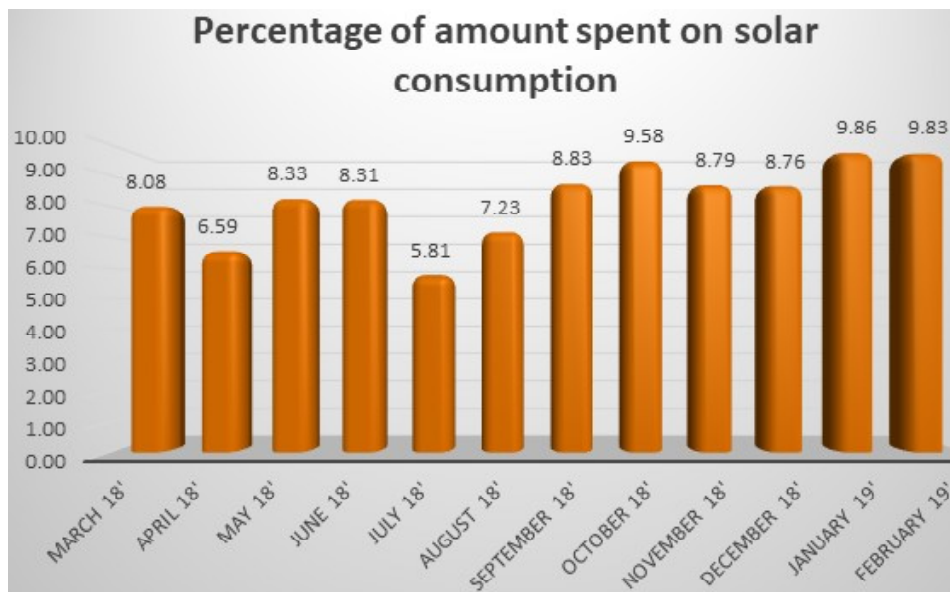
SOLAR POWER CONSUMPTION

Month	Units	Percentage
March 18'	108030.00	8.74
April 18'	88140.00	7.13
May 18'	11132.80	0.90
June 18'	111067.00	8.98
July 18'	77702.00	6.29
August 18'	96689.40	7.82
September 18'	117972.50	9.54
October 18'	128086.00	10.36
November 18'	117423.90	9.50
December 18'	117016.00	9.47
January 19'	131716.80	10.65
February 19'	131312.50	10.62
	1236288.90	



BILL AMOUNT FOR SOLAR CONSUMPTION

Month	Amount	Percentage of amount spent
March 18'	691392.00	8.08
April 18'	564096.00	6.59
May 18'	712485.00	8.33
June 18'	710829.00	8.31
July 18'	497293.00	5.81
August 18'	618812.50	7.23
September 18'	755024.00	8.83
October 18'	819750.40	9.58
November 18'	751512.96	8.79
December 18'	748902.40	8.76
January 19'	842987.52	9.86
February 19'	840400.00	9.83
	8553484.78	



TRANSPORTATION

The college transportation is available (one Swaraj Mazda 25 Seater) for the university. Students and other people visiting the university campus travel by bus. Few regular faculty, other staff and students use cars, bikes and bicycles etc. These vehicle floating is about 20 to 25% of the total floating population. Hence it is observed that the campus is energy efficient and create very less air pollution. University campus has greenery that would minimize the air pollution and also to do carbon sequestration.



WATER AUDIT

Water auditing is a method of quantifying water flows and quality in simple or complex systems, with a view to reducing water usage and often saving money on otherwise unnecessary water use. There is an increasing awareness around the globe of the centrality of water to our lives. This awareness crosses political and social boundaries. In many places people have difficult access to drinking water. Often it is polluted. Water auditing is a mechanism for conserving water, which will grow in significance in the future as demand for water increases.

Water Auditing and Water Conservation is aimed at undergraduate and graduate students in environmental engineering and science programs, water auditors and professionals in the water field, especially those motivated by quantitative water conservation needs. There is a strong emphasis on principles, and on the relationship of water auditing with associated activities like environmental auditing, environmental management systems, resource conservation, flow measurement, water quality and legal frameworks. Qualitative and quantitative analysis of water consumption. It helps in analysing risk and opportunities associated with water to manage water efficiency as part of the sustainability strategy.

Benefits of Water Audit

- Water audit improves the knowledge and documentation of the distribution system,
- Identifies the problem and risk areas and a better understanding of what is happening to the water after it leaves the source point.
- Leads to reduced water losses,
- Improved financial performance,
- Improved reliability of supply system

- Efficient use of existing supplies
- Better safeguard to public health and property and reduced legal liability,
- Reduced disruption, thereby improving level of service to customers.
- Large potential cost savings that can be achieved by water harvesting, through the recycling of water and the use of rainwater.

Sources of water

The water source is borewell. The campus has overhead tanks for each building along with bore well. For drinking water RO plants is set up in the campus.

Methodology

Water audit involves preliminary water survey and detailed water audit. Preliminary water survey is conducted to collect background information regarding plant activities, water consumption and water discharge pattern and water billing, rates and water cess. After the analysis of the secondary data collected from the industry, detailed water audit is conducted, involving the following steps:

- On-site discussion with facility manager and personnel
- Water system analysis
- Quantification of baseline water map
- Monitoring and measurements using pressure and flow meters and various other devices
- Quantification of inefficiencies and leaks
- Quantification of water quality loads and discharge
- Quantification of variability in flows and quality parameters
- Strategies for water treatment and reuse of direct use



Water Consumption Details

Water used for campus needs are from borewells. This indicates two aspects; one is drawing water from ground water and other is recharging water into the ground. The following are details:

Area	Consumption
Total unpaved area (sq.mts)	13063.19
Total paved surface (sq.mts)	15823
Total area of rooftop	77943.15
Water storage (Tanks)	114500
Sump capacity	563000
RO plant capacity in litres	18500
Regular visiting population	8379
Floating population	890
Total per capita consumption of hostels (Litres)	101
Total per capita consumption for other buildings	45
Total water used for entire Landscape s(includes drip, direct and irrigation from sumps (Litres)	1,20,000 to 1,50,000

Type	Per capita Consumption	Consumption per day	Water wastage per day
Hostels	101	128977	102181.6
Other Buildings	45	359640	287712
		488617	389893.6

Rainwater Harvesting

To conserve water, minimize wastage & to ensure its more equitable distribution both across and within the states through integrated water resource development and management. Promotion of citizen and state actions for water conservation, augmentation and preservation is one of the goals of the campus.

Considering the average annual rainfall of the YSR Kadapa District 710 mm, which ranges from nil rainfall in January to 137 mm in October. October is the wettest month of the year. On the other hand the campus soil is alkaline and has shortage of water. In view of this, university has constructed about 100 soak pits & trenches and 100 farm ponds that are made to catch the rainwater through the campaign. And also constructed 15 Rainwater harvesting Structures near the building.

The potential scope of harvesting water from all the rooftop areas of the buildings within the campus

Total rooftop area (sq.mts)	77493
The amount of rain water that can be harvested from the rooftop per 1000 sft is	30,000
Potential water harvest per year	2,09,23,110
Average water consumption on working days (230 days)	14,68,81,910
Average consumption for landscape on non working days (135 days)	1,62,00,000
Total Water required	16,30,81,910

Water Quality

It is observed that pH and EC was correlated negatively for both phosphate and nitrate ($P < 0.05$), COD (-0.624), TDS(0.327), TSS(-0.416) were showed negatively correlation with nitrates ad also phosphates with nitrates. It was evident that all the physic chemical parameter investigates, among all only few are negatively correlated remain were recorded with $p < 0.05$ at 5% significant that is two tailed significance with correlation table.



WASTE AUDIT

An effective waste reduction program must be based on current and accurate information on the quantity and composition of the waste stream. Therefore, the first step is a "waste audit," a systematic procedure to review operations and subsequently, waste generation. Performing this exercise will define the composition of your discards by examining how materials enter and exit your facility. All operations produce waste and there is nothing shameful or wrong by recognizing it. However, today's concern over waste generation and increasing costs of collection and disposal are good reasons to find out how to reduce waste, increase recycling, and try to cut costs. An audit alone will not reduce your business' waste. Rather, it is the starting point that will enable your business to make informed decisions on how to allocate resources for source reduction and recycling programs.

A waste audit is a physical analysis of waste composition to provide a detailed understanding of problems, identify potential opportunities, and give you a detailed analysis of your waste composition. A waste audit will help you clearly identify your waste generation to:

- Establish baseline or benchmark data.
- Characterise and quantify waste streams.
- Verify waste pathways.
- Identify waste diversion opportunities.
- Identify source reduction opportunities.
- Assess effectiveness and determine ways to improve efficiency of your current waste management systems.
- Gain specific information for local government or NABERS accreditation.
- Obtain detailed data on waste generation.

Once the audit is complete, you can see what parts of your program works well and what needs to be improved. In most cases, audits expose if materials are being

placed in the wrong containers, if there are opportunities to develop new recycling streams, or if materials can be removed from the waste stream completely. Based on your findings, your waste audit team can develop to capture more recyclables and reduce any excess waste.

In long run this saves money, reduces waste and disposal costs and creates positive environment campus image. This also helps in devising the ways and methods of reducing wastes at the source.

Hazardous Waste - Institute adopts standard operating procedures for safe disposal of hazardous chemicals collected in the chemistry laboratory and other allied departments. The chemicals like acids utilized for experiments are very negligible hazardous chemicals. So the chemicals of through the normal waste in shrinks.

Waste classification & Quantity

The waste generated in the campus is majorly of three types i.e., Wet Waste, Dry Waste and Hazardous Waste. The waste generating sources in the campus are:

SNo	Source	Types of Waste	Quantity of waste produced per day
1	Canteen	Vegetable waste & cooked food waste	44 Kgs
2	Hostels	Plastic, paper, cloth, sanitary	143 Kgs
3	Classrooms	Paper and plastic	9 Kgs
4	Labs	Glass, chemicals, iron, paper & plastic	18 Kgs
5	Construction Site	Broken bricks, cement pieces	31 Kgs
6	Garden	Litter	24 Kgs
7	Washrooms	Sanitary waste	13 Kgs
8	Any other areas	Plastic waste	9 Kgs
			291 Kgs

COLLECTION, STORAGE & DISPOSAL OF WASTE

Wet waste

The wet waste generated from the canteen is being sent to compost unit and also part of it is given to the piggery people from the nearby village. They collect the food waste and use as feed for the pigs. Therefore, the major part of the wet waste is disposed properly and also reused. The litter of the campus is composted through vermi compost unit. The campus has lot of greenery in various patches and also in and around department buildings. The litter is collected in trollies and send to compost units for composting. The resulted manure is used to the plants and nursery in the campus itself. Especially leaf litter is being composted separately.

Dry Waste

The dry waste like paper, glass, plastic etc from the classrooms, department rooms and labs are stored in separate spaces. But there is no method for their disposal. University have a mechanism to dispose paper waste of library. The magazines are stored for 2 to 3 years and disposed for recycling through tender process. On the other hand, the books which deteriorate are being sorted and book binding is done for reuse.

E-Waste Management

Computers and their parts, telephones, printers and other electronic devices will become obsolete or do not function properly after some years and become e-waste. Proper collection and disposal of e-waste is very important as they are mostly made of very dangerous metals like lead, cadmium etc. All the E-Waste like key boards, mother boards, printers etc generated in the college premises as of now is stored in a separate room.

OBSERVATIONS AND RECOMMENDATIONS

OBSERVATIONS

- Source segregation started within the campus. Awareness on segregation was done amongst the students and staff through various campaign activities.
- Lab waste disposal mechanism is not found. But the waste is store in separate space so that it is not mixed with the regular waste.
- There is no mechanism for e-waste and sanitary waste disposal.
- As of now there is no specific campus environment policy framed by the management to make campus Eco friendly and Carbon neutral.
- Since the connections are old and many connection are through underground pipe network, there might be chances for underground leakage that is not visible though surface observation.
- On an average 4231 Litre of water is wasted due to leakages, broken tapes & pipes and overhead tank etc per day as real loss.

Good Practices observed

- Good rainwater harvesting structure has been built in this area. The rainwater is harvested through soak pit and water fallen on the paved and unpaved area are channelized to soak pits and farm ponds within the campus.
- farm pond serves as a source of drinking water to animals and birds that live in this area
- Sprinkler System has been used for gardening which is efficient system for watering.
- Usage of solar power to meet the needs of the campus.

RECOMMENDATIONS

- The wet and dry waste management has to be streamlined for better waste management.
- Dry waste centre has to be set up and need to partner with any recycler available in the district and plan for safe disposal of the dry waste.
- There is a need to set up a vending Machine in the college hostels and waiting rooms to collect the used sanitary napkins and dispose scientifically. Presently, campus doesn't have sanitary waste Management mechanism.
- Pumps need to be switched off once the tank is full
- To control Leakage - Taps needs to retro fitted as it has become old and are the main source of leakage and worn-out connections needs to be replaced.
- Proper Maintenance of Rainwater harvesting structure has to be constructed in the low-lying areas. Rainwater harvesting structure can be partially covered to control the Evaporation loss.
- Farm pond is to be maintained properly, so that they won't become the breeding ground for mosquitoes.
- More optimum methods for floor cleaning like using mops and vacuum cleaners to conserve water.
- STP has to be constructed for treating wastewater of the campus and the treated water can be used for landscape and flushing the toilets.