

K. S. INSTITUTE OF TECHNOLOGY

BANGALORE

Ref: KSIT/GEN/2023-24

Date: 07.12.2023

CIRCULAR


As energy auditing for the entire campus is being carried out on 14th and 15th December 2023. In this regard, we request you to co-operate with the audit team.



PRINCIPAL

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K.S. INSTITUTE OF TECHNOLOGY
BENGALURU - 560 109.

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Status and ENERGY Audit

AT



Kammavari Sangha Institute of Technology

*#14, Kanakapura Road, Raghuvanahalli, Bengaluru 560109
Karnataka*

Affiliated to VTU-Belagavi

December 2023

Submitted by:

e-Xcel Energy Bangalore

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Contents

| | |
|--|-----------|
| 1. Executive Summary | 4 |
| 1.1 About Kammavari Sangham | 5 |
| 1.2 COLLEGE PROFILE | 5 |
| 1.3 ABOUT COLLEGE | 6 |
| 2. ENERGY SCENARIO | 7 |
| 3. Earth Pit -Test Results | 11 |
| 4. LIST OF RECOMMENDED ENERGY SAVINGS OPPORTUNITIES AT KSIT | 13 |
| ENERGY CONSERVATION MEASURES | 13 |
| 5. Bio Waste Management | 16 |
| 6. OTHER GREEN INITIATIVES | 17 |

| Abbreviation | Description |
|--------------|--|
| AC | Air-Conditioner |
| °C | Degree Celsius |
| BESCOM | Bangalore Electricity Supply Company |
| CFL | Compact Fluorescent Lamp |
| KSIT | Kammavari Sangham Institute of Technology, Ponnampet |
| DG | Diesel Generator |
| ECM | Energy Conservation Measures |
| FTL | Fluorescent Tube lamp |
| kW | Kilowatt |
| kWh | Kilowatt hour |
| kVAr | Capacitor Value |
| R,Y,B | Phases in a 3 phase system |
| LED | Light Emitting Diode |
| NAAC | National Assessment and Accreditation Council |
| IEC | |
| SEC | Specific Energy Consumption |
| TR | Tons of Refrigeration |
| TL-40 | 40W Tube light |

1. Executive Summary

Electricity requirements of the KSIT campus are met by BESCOM Bangalore as a primary power source to meet the entire requirement of the campus with the help of an outdoor, oil cooled 11kV/433V stepdown transformer of 250kVA capacity installed outdoor in a dedicated yard, this is supported, during outages by two captive diesel generator sets of 125kVA and 250kVA each. The major loads at KSIT are Laboratories of various departments, air-conditioning, lighting, fans, UPS for computers, hostels, sewage treatment plants, and pumps and a manually controlled power factor improvement Capacitor panel. Laboratory loads are intermittent and do not load the system except during examinations.

- The loads are unbalanced and a balancing exercise would help in better management of mains power
- The Power factor correction panel should be upgraded after the repairs recommended to an APFC type to reduce the overall kVA of the mains system. Series Chokes / detuned system is recommended to safeguard the capacitors used as there are 3rd, 5th, and 7th harmonic currents.
- The multi data meter at the incomer panel is showing erroneous data thus misleading the observer.
- Neutral of the transformer secondary is open and is a Safety concern, this has to be attended immediately. As there is a single neutral earth pit it becomes mandatory to create one more earth pit for the same.
- The earth pits for DG1 (250kVA) have failed in their tests and hence have to be re-conditioned.
- The earth pits for DG2 (125kVA) are not traceable, hence new pits have to be provided.
- UPS are spread all over the campus, they can be re-purposed to be placed centrally in two areas for better management of the same.

The audit consisted of an on-site survey, and discussions with KSIT Staff members and support personnel, followed by a technical evaluation of applicable measures that could reduce energy consumption. The site visit encompassed the study of all energy-consuming sources, covering the complete campus.

The summary of the main findings and list of Energy Conservation Measures (ECMs) are presented in this report which had the consent of the KSIT top management team for further action and development and consideration for implementation.

1.1 About Kammavari Sangham

The Kammavari Sangham, a multi-activity non-profit oriented voluntary service organization, was established in the year 1952 with the sole objective of providing charitable service to community and society.

The Sangham has diversified its activities since its establishment over five decades ago. With a firm belief that quality and meaningful education only can lay the strong foundation for bringing about economic and social changes to the lives of thousand, the Sangham went about establishing educational institutions, starting with K.S. Polytechnic in 1992

Enthused with this success of its foray into technical education, the Sangham moved forward by starting the K.S Institute of Technology (KSIT), its under graduate Engineering College in the year 1999. In the following years both these institutions have carved for themselves an enviable niche through academic excellence achieved in a very short span of time. By providing FREE hostel accommodation and scholarship to the deserving students in the community, it has furthered its Commitment to education.

1.2 COLLEGE PROFILE

| Description | Status |
|-------------------------|--|
| Name of College | Kammavari Sangham Institute of Technology |
| Place | Raghuvanahalli, Kanakapura Rd Bengaluru 560109 |
| State | Karnataka |
| Affiliating University | Visvesvaraya Technological University, Belagavi. |
| Status of the College | Self-Financing |
| Type of College | Co-Educational |
| No. of Departments | 10 |
| No. of Branches | 1 |
| Date of establishment | 1999 |
| Location of the College | Bengaluru |

2. ENERGY SCENARIO

Electricity, diesel, and LPG are the major energy sources. Electricity is consumed all around the campus by various loads such as lights, fans, computers, pumps, ACs, and equipment in the Labs. Diesel is used as fuel for Diesel Generator (DG) sets. LPG is the main source for cooking at both the Hostel Kitchens and Student's Canteen.

2.1 ENERGY SOURCES AND CONSUMPTION DATA AT THE KSIT

KSIT utilises BESCO mains supply received at 11.0 kV as the primary power source. As a backup during Outages from BESCO, two diesel-fired captive power generation sets of 125kVA and 250kVA capacity are installed.

Table 2.1 Average 30 minutes Power consumption at the Main Incomer of 250kVA BESCO transformer

| | V | I(Amps) | kW | kVA | kVAr | pf | H3 | H5 | H7 |
|---|--------------|---------|--------------|--------------|--------------|-------------------|------|-------|-------|
| R | 237.4 | 91.5 | 20.99 | 21.72 | 9.49 | 0.971 | 9.71 | 24.34 | 14.77 |
| Y | 236.1 | 153.1 | 28.91 | 36.15 | 20.41 | 0.794 | 3.40 | 25.10 | 13.10 |
| B | 236.1 | 164.2 | 29.69 | 38.71 | 24.21 | 0.767 | 6.70 | 23.10 | 11.00 |
| N | 48.8 | | | | | | | | |
| | TOTAL | | 79.59 | 96.58 | 54.11 | 0.884 (Av) | | | |

Table 2.2 Average Power consumption at the Incomer of 250kVA DG

| | V | I(Amps) | kW | kVA | kVAr | pf |
|---|--------------|---------|--------------|---------------|--------------|--------------|
| R | 238 | 190 | 35.71 | 45.3 | 27.5 | 0.790 |
| Y | 241 | 140 | 25.80 | 33.7 | 21.2 | 0.764 |
| B | 240 | 129 | 23.84 | 31.0 | 19.8 | 0.770 |
| N | 56 | | | | | |
| | TOTAL | | 85.45 | 110.04 | 68.50 | 0.775 |

Table 2.3 Six step (manual) Capacitor Bank function test

| Step | kVAr | Observations | Recommendations |
|------|------|----------------------------|-----------------|
| 1 | 5 | Y & B-Phase weak | To be replaced |
| 2 | 10 | Ok, working | NIL |
| 3 | 15 | B-Phase not working, burnt | Repair needed |
| 4 | 15 | Ok, working | NIL |
| 5 | 25 | B-Phase weak, burnt | Repair needed |
| 6 | 25 | Ok, working | NIL |

Observations:

1. The average PF (power factor) of the college loads is around 0.775 as seen during DG operation
2. While with the transformer as source of power, the PF correction is happening on the R phase only
3. The PF correction, if any, on the other two phase is very marginal and not sufficient
4. The load is between 80kW to 85kW
5. The uncompensated kVAr is around 50kVAr (responsible for poor PF)
6. Phase-wise Loading pattern is highly unbalanced and varying.
7. Power factor improvement equipment (Panel) is manually operated and therefore, its corrections is not dynamic according to variations in the load.
8. Only three steps are functional and the remaining three steps need repair/replacement attention
9. Neutral currents are large (both during mains supply and on DG also) which has to be near zero.
10. Harmonic currents are present, especially, 3rd, 5th and 7th order currents.
11. Periodic general housekeeping (Cleaning and dust removal) has to be put in place
12. Insulation floor mats missing in front of panels.

Recommendations:

1. Power factor has to be improved by introducing an APFC panel, this will also reduce the undesirable neutral current, and also reduce the load current thereby increasing the life of cables used.
2. Load balancing exercise if possible should be attempted.
3. 3.3 kV rated conforming to IS 15652-2006 must be placed in front of all Electrical Panel boards as it is a Safety non-conformance.
4. The harmonic currents may have to be mitigated as they can harm equipments in the electronics labs and motors in use both for the pumps and test benches in the labs.

2.2 ELECTRICITY DISTRIBUTION AND BREAKDOWN OF ELECTRICITY CONSUMPTION

KSIT utilises BESCOM as the prime power source to meet the entire electricity requirement of the campus. The main feeder data collected are given in the tables below.

Table 2.3 DB-1 from Feeder-1 (Engg Old Bldg back) @ I/C of 250A 4P MCCB

| | V | I(Amps) | kW | kVA | kVAr | pf | H3* | H5* | H7* |
|---|--------------|---------|--------------|--------------|--------------|--------------|------|-------|------|
| R | 240 | 69 | 12.50 | 16.6 | 11.91 | 0.755 | 7.50 | 6.10 | 3.50 |
| Y | 243 | 50 | 8.10 | 12.2 | 9.15 | 0.660 | 5.00 | 11.20 | 4.10 |
| B | 242 | 43 | 6.30 | 10.4 | 8.25 | 0.606 | 5.50 | 5.50 | 0.00 |
| N | 23 | | | | | | | | |
| | TOTAL | | 26.90 | 39.20 | 29.31 | 0.674 | Av | | |

* Max harmonics contributed from load in 3rd 63A MCB in first row

Table 2.4 DB-3 Admin & Canteen Loads (Basement next to canteen)

| | V | I(Amps) | kW | kVA | kVAr | pf |
|---|--------------|---------|-------------|--------------|-------------|----------------|
| R | 238 | 22.8 | 3.95 | 5.43 | 3.73 | 0.727 |
| Y | 238 | 19.6 | 3.97 | 4.66 | 2.44 | 0.851 |
| B | 238 | 6.2 | 1.04 | 1.48 | 1.05 | 0.700 |
| N | 8.6 | | | | | |
| | TOTAL | | 8.96 | 11.57 | 7.22 | Av0.759 |

No significant harmonic currents

Table 2.5 DB-4 Near Machine Shop

| | V | I(Amps) | kW | kVA | kVAr | pf | H5 | H7 | |
|---|--------------|---------|--------------|--------------|--------------|--------------|-------|-------|--|
| R | 236 | 113 | 21.25 | 26.7 | 16.17 | 0.797 | 17.70 | 14.60 | |
| Y | 235 | 83.5 | 15.13 | 12.4 | 9.15 | 0.771 | 18.00 | 14.50 | |
| B | 236 | 86.2 | 15.32 | 20.3 | 13.32 | 0.753 | 18.00 | 13.50 | |
| N | 29 | | | | | | | | |
| | TOTAL | | 51.70 | 59.39 | 38.64 | 0.774 | Av | | |

Table 2.6 Machine Shop B-004

| | V | I(Amps) | kW | kVA | kVAr | pf |
|---|--------------|---------|--------------|--------------|--------------|-------------|
| R | 243 | 46.1 | 5.61 | 11.20 | 9.69 | 0.50 |
| Y | 242 | 43.4 | 5.36 | 10.50 | 9.03 | 0.51 |
| B | 242 | 42.2 | 4.99 | 10.20 | 8.89 | 0.49 |
| N | 2 | | | | | |
| | TOTAL | | 15.96 | 31.90 | 27.61 | 0.50 |

Table 2.7 Foundry and Forging Lab

| | V | I(Amps) | kW | kVA | kVAr | pf |
|---|--------------|---------|-------------|--------------|--------------|-------------|
| R | 244 | 27.0 | 2.77 | 6.59 | 5.98 | 0.42 |
| Y | 243 | 22.4 | 2.56 | 5.44 | 9.03 | 0.47 |
| B | 242 | 26.2 | 2.73 | 6.34 | 4.8 | 0.43 |
| N | 3.6 | | | | | |
| | TOTAL | | 8.06 | 18.37 | 19.81 | 0.50 |

**Table 2.8 Computer network & Project work Lab OB 109A OB 109B
ML Lab & DBMS Lab 108A and 108B**

| | V | I(Amps) | kW | kVA | kVAr | pf |
|---|--------------|---------|--------------|---------------|---------------|-------------|
| R | 240 | 15.0 | 18.72 | 36.00 | 30.75 | 0.52 |
| Y | 242 | 20.6 | 19.94 | 49.85 | 45.71 | 0.40 |
| B | 241 | 21.0 | 25.31 | 50.61 | 48.81 | 0.50 |
| N | 3.6 | | | | | |
| | TOTAL | | 63.97 | 136.46 | 125.27 | 0.47 |

Table 2.9 Basic Electrical Engg and 25kVA UPS OB 308 & 309

| | V | I(Amps) | kW | kVA | kVAr | pf |
|---|--------------|---------|-------------|-------------|-------------|-------------|
| R | 238 | 7.7 | 0.50 | 1.83 | 1.76 | 0.27 |
| Y | 239 | 6.2 | 0.65 | 1.48 | 1.33 | 0.44 |
| B | 241 | 8.7 | 1.03 | 2.10 | 1.83 | 0.49 |
| | TOTAL | | 2.18 | 5.41 | 4.92 | 0.47 |

Anomaly in loading pattern

Table 2.10 15kVA UPS GF (near ladies' toilet)

| | V | I(Amps) | kW | kVA | kVAr | pf |
|---|--------------|---------|-------------|-------------|-------------|-------------|
| R | 243 | 5.9 | 0.49 | 1.44 | 1.36 | 0.34 |
| Y | 244 | 3.4 | 0.26 | 0.83 | 0.79 | 0.31 |
| B | 242 | 5.3 | 0.28 | 1.28 | 1.25 | 0.22 |
| N | 1.2 | | | | | |
| | TOTAL | | 1.03 | 3.55 | 3.40 | 0.47 |

Table 2.11 UPS Panel at Basement

| | V | I(Amps) | kW | kVA | kVAr | pf | Busbar °C |
|---|--------------|---------|--------------|--------------|--------------|--------------|-----------|
| R | 237 | 55.2 | 8.77 | 13.10 | 9.73 | 0.670 | 50.5 |
| Y | 238 | 49.2 | 7.55 | 11.71 | 8.97 | 0.645 | 51.4 |
| B | 236 | 66.1 | 10.14 | 15.60 | 11.85 | 0.650 | 41.6 |
| N | 9 | | | | | | |
| | TOTAL | | 26.46 | 40.41 | 30.55 | 0.655 | |

Busbar temperatures are high, the room needs ventilation and cleaning

Table 2.12 Pump motors - 5kW Borewell motors at Basement

| | V | I(Amps) | kW |
|---|--------------|---------|-------------|
| R | 231.5 | 10.71 | 1.86 |
| Y | 232.7 | 11.17 | 1.95 |
| B | 232.1 | 11.09 | 1.93 |
| | TOTAL | | 5.74 |

| | V | I(Amps) | kW |
|---|--------------|---------|-------------|
| R | 231.5 | 10.50 | 1.82 |
| Y | 232.2 | 11.16 | 1.94 |
| B | 232.1 | 10.80 | 1.88 |
| | TOTAL | | 5.64 |

Sump Motor

| | V | I(Amps) | kW |
|---|--------------|---------|-------------|
| R | 232.1 | 8.47 | 1.47 |
| Y | 230.9 | 8.60 | 1.49 |
| B | 231.5 | 8.11 | 1.41 |
| | TOTAL | | 4.37 |

The following areas were also visited for Data collection but the values were too low for reporting, and they are:

1. B 002 FM Lab
2. B 001 Workshop practical Lab
3. B 007 Energy Lab
4. B 005 Heat transfer Lab
5. OB 210 Embedded Lab & OB 211 VLSI Lab (Both supplied from UPS)
6. OB 010 Electronics Devices Lab & OB 011 Digital Systems Lab (Both supplied from UPS)

3. Earth Pit -Test Results

The major electrical Sources installed in KSIT as listed above are the outdoor oil-cooled 250kVA transformer and two DGs of capacity of 250kVA and 125kVA each. For the safety of the users it is **mandated** that these sources **MUST** have their neutral conductors earthed through Copper flat conductors to a well maintained earth pits whose ground resistances should be less than 2Ω . The tested values are given below.

EP-DG1N1-13.01 Ω EP-DG1N2-13.60 Ω



Earth pit NOT traceable, interconnections with Bolts not allowed, should be braised



Neutral earth strip from transformer is detached from earth conductor, therefore transformer neutral earth was floating posing a great danger to the mains supply users

4. LIST OF RECOMMENDED ENERGY SAVINGS OPPORTUNITIES AT KSIT ENERGY CONSERVATION MEASURES

ECM-1: To replace the battery and UPS systems spread in various locations to one or two centralised locations

PRESENT LOCATION OF THE SYSTEM AND PROPOSAL

- Consolidation of UPS system in Laboratory and Server Room and other areas
- Good Batteries may be used and replacement of faulty ones is necessary

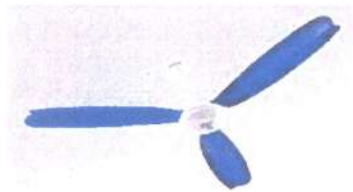
ECM-2: Replace identified ceiling fans with energy-efficient fans

PRESENT SYSTEM

- KSIT has all conventional ceiling fans installed and operated in the class rooms, labs and hostels at the college campus
- Ceiling fans are the major loads at the KSIT campus.
- Rated power for the existing fans are around 80W and will consume around 80 watts at full speed

PROPOSAL

- Replace existing conventional fan with high energy-efficient fans
- The rated power of the proposed fans will be around 35 W at maximum speed and will consume power varying 10 W to 35 W based on the speed
- The proposed fan is available with variance of color and comes with handy remotes too.



PROPOSED FAN

ESTIMATED BENEFITS

| | |
|----------------------------------|-----------------------------------|
| Recurring annual cost savings | : Rs. 95,722 (17,172 units saved) |
| Capital Investment (approximate) | : Rs. 10,10,000 |
| Payback Period | : 126 months |
| Savings measurement | : Direct |

ECM-3: Install Solar Water Heaters

PRESENT SYSTEM

- KSIT has Geysers installed at the Boy's and Girl's Hostels
- At 3hours a day for 300 working days, the energy consumption is estimated to be 32,400 units.
- This costs KSIT about Rs 180,500 annually.

PROPOSAL

- Replace existing electric Geysers with rooftop solar Water heaters



ESTIMATED BENEFITS

| | |
|-------------------------------|-------------------------------------|
| Recurring annual cost savings | : Rs. 1,80,500 (32,400 units saved) |
| Capital Investment | : Rs. 21,70,500 |
| Payback Period | : 12 months |
| Savings measurement | : Direct |

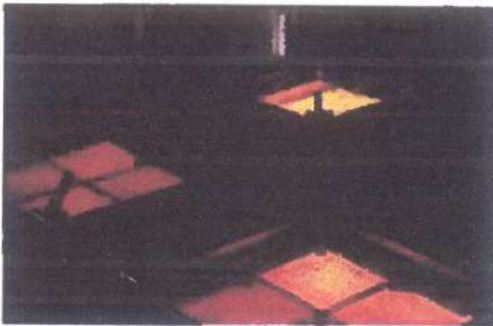
ECM 4: REPLACE CONVENTIONAL TYPE LPG FIRED STOVES WITH AN ENERGY-EFFICIENT BURNER TO SAVE GAS CONSUMPTION

PRESENT SYSTEM

- Kitchen gas stoves are installed with conventional type burners
- Maximum thermal efficiency of conventional type burner is in the range of 36 - 45 %
- For ease of ignition purpose the idle gas is continuously blown in each kitchen gas burners irrespective of gas stove usage. See typical pictures in the following section of existing type burners

PROPOSAL

- Replace conventional type LPG gas stove and burners with patented energy-efficient radiant heating technology using the same LPG. The 24 gas stoves are recommended for replacement with the new radiant heating stoves.
- The proposed heating system thermal efficiency is in the range of 65 - 68 % which is equivalent to about 30 % savings in LPG
- Proposed heating system is indirect heating, so it improves even heat distribution over the vessel/pan and there is no carbon soot formation on the vessels
- This scheme is successfully implemented in several Hotels and staff canteens across India including Taj and ITC group of hotels.



PROPOSED ENERGY-EFFICIENT STOVES

ESTIMATED BENEFITS

| | |
|---------------------------------|---------------|
| Recurring annual cost savings | : Rs. 220,977 |
| One-time cost of implementation | : Rs 670,000 |
| Payback period | : 36 months |
| Savings measurement | : Direct |

5. Bio Waste Management

Bio waste is segregated and that which can be composted are diverted to the Compost/vermi-culture area and the compost used for the garden could be implemented in the Campus.



6. OTHER GREEN INITIATIVES

i. Solar Investments

KSIT can investigate implementation of a Rooftop Solar Power plant on the roof of the various Blocks



It is recommended to install Solar water heater to meet the hot water requirements of the KSIT Hostels as presently electric Geysers are used. Currently the annual geyser energy consumption is about 32,000 units leading to a cash out flow of about Rs 1,80,000/=. A low-lying area may be chosen to make an artificial pond, which will attract birds, and this will also help recharging the water table of the area and control landslides and floods in the region.

OBSERVATIONS

Along with the above other initiatives mentioned in the previous section the same will be considered by the management based on the feasibility and cash flow of the institution.

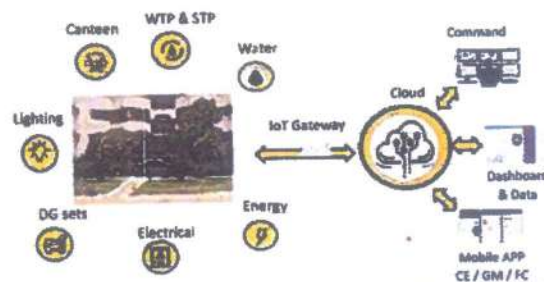
Internet of Things (IoT) based Automation Solutions:

Today the conventional method of monitoring and controlling is getting replaced/upgraded with Artificial Intelligence (AI) – Internet of Things (IoT) based automated solutions. AI-IoT automation promises “intelligent solutions,” where management can run the facility wherever they are instead of physically from control room or in-situ. Intelligent automated operations are far simpler, easy to understand and operate, have accurate information all the time, eliminate inefficiencies, sustain the gains. Accordingly, AI-IoT automation is the new normal.

On a need basis, KSIT could take the assistance of e-XCEL for detailing out IoT schemes as a separate assignment. In such a case, if desired by KSIT, Proof-of-Concept (PoC) can be carried out by E-XCEL for meeting any priority requirements.

Benefits of AI IoT based automated solutions

- Identify the pain points and adapt mitigating solutions which would concurrently yield monetary benefits.
- Through the sensors and monitors coupled with connected load, will automate the utility equipment operation and control energy consumption based on optimum level without hindering the operation of the facility.
- Other key monitoring sensors and meters will help in the benchmarking, 365-day monitoring of major key energy areas and help management to help reduce operating cost.



A typical representation of IoT based Automation System for a College Campus

Note: These are observations from the data collected during the audit period; any changes subsequently made are not part of the report.

TEST REPORT AFTER DOING THE EARTHING NEWLY DONE

Test Report for Neutral Earth Pits

Tested On Date:12/01/2024
Next Due On:11/01/25

Report No.: EE/01/01-24
Page No.: 1 of 1

Site : **KSIT**
14, Kanakapura Road,
Raghuvanahalli,
Bengaluru 560109, Karnataka



Standards Used: -

| Nomenclature | Make | Serial Number | Trace ability | Cal. Validity |
|--------------|--------------|---------------|---------------|---------------|
| Earth Tester | CIE DET 2000 | 200019690 | EIC | Sep.2024 |

| SI No | Location Description | Resistance Ω | Remarks |
|-------------------------|-----------------------------------|---------------------|---------|
| DG Area | | | |
| 01 | Earth Pit-01 125kVA DG Neutral | 3.27 | Passed |
| 02 | Earth Pit-02 250kVA DG Neutral -1 | 1.27 | Passed |
| 03 | Earth Pit-03 250kVA DG Neutral- 2 | 1.65 | Passed |
| Transformer Yard | | | |
| 04 | Earth Pit-04 Trafo Neutral - 1 | 0.73 | Passed |
| 05 | Earth Pit-05 Trafo Neutral - 2 | 0.56 | Passed |

Note:

- 1) Please mark the borders of the pit with Yellow/Green paint and the lid/Cover with yellow and black stripes.
- 2) The resistance value with the test and Due dates to be marked on the lids/Covers

| | | |
|---|---|---|
| TESTED BY Vishwanath V Technician |  | For e-XCEL ENERGY  Authorized Signatory |
|---|---|---|

K.S. INSTITUTE OF TECHNOLOGY,

BENGALURU-560109

NSS UNIT

CIRCULAR


DATE: 04-06-23

NSS unit of KSIT is organizing an event on "**WORLD ENVIRONMENT DAY**" on 05/06/2023. All NSS Volunteers and faculty members are requested to join the program and make grand success.

Venue: Room no 101

TIME: 3:00pm-4:00pm


NSS.P.O


Principal
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K.S. INSTITUTE OF TECHNOLOGY

National Service Scheme

ರಾಷ್ಟ್ರೀಯ ಸೇವಾ ಯೋಜನೆ



14, Raghuvanahalli, Kanakapura Main Road, Bengaluru - 560 109.

ENVIRONMENT DAY

DATE: 05\06\2023

Venue: KSIT Old building (Room number 007)

Organized By: NSS Unit of KSIT in Association with Institution's Innovation Council.

Duration: 02.00pm – 04.00pm.

Participants: Principle, CEO, All the department heads and NSS Volunteers.

INCHARGE FACULTY: Mr. Naveen V, NSS Program Officer, KSIT

OBJECTIVES:

It calls for collective, transformative action on a global scale to celebrate, protect and restore our planet Earth.

HISTORY OF ENVIRONMENTAL DAY

World environment day is celebrated on June 5 every year and this day is commemorated to raise awareness about environmental issues, the increasingly deteriorating conditions, climate change etc. This day acts as a reminder to people to be more considerate and aware of the Earth's existing conditions, in terms of the environment.

SCOPE OF THE PROGRAM

To celebrate by planting new saplings and create awareness by making posters.

HIGHLIGHTS OF THE EVENT

Inauguration of Environmental day was organized by welcoming all the dignitaries to the hall (Room number 007). We celebrated the environment day by making poster. All the NSS volunteers created the awareness by explaining the posters to the Dignitaries and for all the participants. The objective of making the posters on this day is to spread awareness among common people about the issues of the environment and the encourage common people from different society and community to actively participate. Finally distributed the prizes to encourage the participants.





PROGRAM OUTCOMES:

At the end of the programme, the following PO's are attained.

| NSS | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PO9 | PO10 | PO 11 | PO 12 |
|------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|-------|-------|
| NSS PROGRAMME | | | | | | 2 | 3 | | 3 | | | 3 |

Justification of PO mapping:

- *Students can able to assess societal, health, safety, legal and cultural issues and the consequent responsibilities .*
- *Students can able to Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development .*
- *Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.*
- *Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change*



NSS COORDINATOR

NSS Programme Officer
K S Institute of Technology
Kanakapura Main Road
Bengaluru - 560 109



PRINCIPAL

PRINCIPAL

K.S. INSTITUTE OF TECHNOLOGY
BENGALURU - 560 109.



K.S. INSTITUTE OF TECHNOLOGY

National Service Scheme

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14, Raghuvanahalli, Kanakapura Main Road, Bengaluru - 560 109.

ENVIRONMENTAL DAY

Date of Conduction of Program: 06.06.2022

Venue: KSIT

Organized by: NSS UNIT OF KSIT

Duration: 2.50pm -3.30pm

Participants: Principal, NSS Officer, HOD's and NSS volunteers.

HISTORY OF ENVIRONMENTAL DAY

World environment day is celebrated on June 5 every year and this day is commemorated to raise awareness about environmental issues, the increasingly deteriorating conditions, climate change etc. This day acts as a reminder to people to be more considerate and aware of the Earth's existing conditions, in terms of the environment

SCOPE OF ENVIRONMENTAL DAY

To celebrate by planting new saplings.

OBJECTIVE OF THE EVENT

It calls for collective, transformative action on a global scale to celebrate, protect and restore our planet Earth.

HIGHLIGHTS OF THE EVENT

All the volunteers took part in the event for celebrating environmental day organized by KSIT NSS unit. They planted several saplings of different kinds. Students from all the semester came up front as a joint force to save mother Earth and to preserve and raise awareness about the deteriorating environmental conditions. The event went on successfully.



PRINCIPAL AND STAFF PLANTING SAPPLINGS



NSS UNIT CELEBRATING ENVIRONMENTAL DAY



ENVIRONMENT DAY

Date of Conduction of Program: 5th MAY, 2018

Venue:Thurahalli forest area

Organized by: NSS unit in association with Forest department &Parisara samrakshana vokuuta.

Duration: 10.30 am to 3 pm

Participants: NSS Volunteers and Government school students and local people.

WORLD ENVIRONMENT DAY HISTORY

World Environment Day (also called as WED) has been started celebrating as an annual event on every 5th of June since 1973 in order to raise the global awareness about the importance of the healthy and green environment in the human lives, to solve the environmental issues by implementing some positive environmental actions as well as to make aware common public worldwide that everyone is responsible for saving his environment and not only somebody, government or organizations working for it.

Scope of the program:- The environment has become increasingly polluted with contaminants and toxins, and these have a harmful impact on our health. They can cause respiratory diseases and cancer—and that's just for starters. By raising awareness of the issues with the air that sustains us, World Environment Day inspires us to do something about it and fix the environment we can't live without.

Objectives of the program:-

- 1) To bring awareness to people about ENVIRONMENT
- 2) To make the environment clean

Highlights of the program:-

NSS unit in association with forest department and an NGO Parisara samrakshana vokutta successfully conducted an event of sowing seed balls of different jungle trees in the Thurahalli forest area with the help of Government school children's ,NSS Volunteers,localites.The program was inaugurated by Regional forest officer, Mr Mukund rao founder of Parisara smrakshana vokutta and Mr.Chowdappa.M.R NSS Programme officer,Mr.Umesh Physical education director of KSIT.we have also conducted an Environment awareness program to the students in this program.



AWERNESS PROGRAM BY NSS PO





SEEDS OF DIFFERENT TREES TO SOW



PERFORMING POOJA FOR THE SEEDS



SOWING SEEDS IN THE FOREST AREA BY NSS VOLUNTEERS



SOWING SEEDS IN THE FOREST AREA BY NSS VOLUNTEERS AND SCHOOL CHILDRENS



NSS VOLUNTERS WITH SCHOOL CHILDRENS



ENVIRONMENT DAY 05-06-2018

HAZARDOUS CHEMICALS WASTE MANAGEMENT REPORT



Kammavari Sangham (R) - 1952
K.S.Group of Institutions
K S INSTITUTE OF TECHNOLOGY

#14,Raghuvanahalli, Kanakapura Main Road,Bengaluru-560109

DEPARTMENT OF CHEMISTRY REPORT ON HANDLING OF HAZARDOUS CHEMICALS

Date: 1-09-2022

Raw chemicals are not using directly, chemicals are diluted at very low grade concentrations, and while doing experiments again it will get even more diluting. And finally it is collected in waste chemical collecting containers and again it is diluted with water and dumped in separate drainage pits, empty chemical containers were handled to house keeping department.

Fuming chemicals are handled separately in fumigation chamber which will exhaust separately through fuming ducts while doing solution preparations. Flammable chemicals are stored in cool and dry place avoiding sunlight, electrical batteries and switches to avoid short circuits etc..

Washing hands with soap after using chemicals for both students and staff.


Instructing students to wear uniform, apron and shoes for safety.

First aid kit facility is provided for laboratory.

Minimal usage of chemicals for the experiments.

Laboratory safety practices followed.


LAB. INCHARGE
(SHYLAJA K.R.)


LAB. INSTRUCTOR
(DEEPAK RAJ R.T.)


PRINCIPAL
K.S. INSTITUTE OF TECHNOLOGY
BENGALURU - 560 109.

E- WASTE MANAGEMENT REPORT



CERTIFICATE OF DESTRUCTION

Date: 01-08-2023

REFNO: EPRCR/23-24/0158A

PCE/WMC/37/E-Waste/2015/2018-19/Reg.No.166812/2019

We certify that, we have recycled in an environmental friendly manner

Scrap & weight of quantity of CPU-52, Monitor-84, Keyboards-41, Mouse-36, Projector-07, Printers-4, Laptops-1, Interfacing-16, Air Conditioner-1, Network Switches-3, Power Cables-1 Box, VGA Cable-1 Box, Empty Cartridges-33, Paper bedder-1 No's of electronic scrap & E-Waste picked

Total Weight: 1780 KGS.

From:

K.S. INSTITUTE OF TECHNOLOGY

#14, Raghuvanahalli, Kanakapura Main Road, Bangalore-560109.

Pickup Date: 25/07/2023

Epragathi recycling hereby declares to that collected E-waste is Destructed According to all applicable local, state & central guidelines

Epragathi Recycling acknowledges receipt of the Material listed on COD including any data storage media present in the Material. Epragathi Recycling certifies that all the information and data on the Media is completely erased and unrecoverable.

Ramesh
Principal
INSTITUTE OF TECHNOLOGY
BENGLURU - 560109

GST No. 29BUPB8342G1Z0

Road No. 18, H1A08 Industrial Area, 2nd Phase, Antharasanahalli, Tumkur - 572 106,
Ph: 9890455517 TOLL F. No. : 18002585106 E-mail : ramesh@epragathi.com

