



KONGU ENGINEERING COLLEGE

(Autonomous)

PERUNDURAI, ERODE - 638 060, INDIA



CERT No.: 99-100-20788
ISO 9001:2015

Estd : 1984

Dr.T.Logeswaran, M.E., Ph.D

Associate Professor

BEE Certified Energy Auditor (Regd.No:EA13164)

Department of Electrical and Electronics Engineering

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Ref: KEC/GA/2023-2024/CE12

07/06/2024

GREEN AUDIT CERTIFICATE

This is to certify that, we have conducted a **Green Audit** in **City Engineering College**, Doddakallasandra, Off Kanakapura Road, Next to Gokulam Apartment, Bangalore - 560 062, Karnataka on 3rd June, 2024. The audit process investigates the following activities.

- I) Coverage of matured trees
- II) Site Preservation
- III) Reduction of heat island effects
- IV) Inspection of the water conservation measures
- V) Pedestrian network
- VI) Energy efficiency
- VII) Health and well-being facilities

Audited and Accounted for June 2023 to May 2024

Yours Truly

Dr.T.Logeswaran

Certified Energy Auditor EA-13164,

IGBC – AP, ISO 14001:2015 -

Environmental Management Systems

Lead Auditor

**DEPT. OF ELECTRICAL & ELECTRONICS ENGG
KONGU ENGINEERING COLLEGE,
THOPPUPALAYAM (PO)
PERUNDURAI (TK), ERODE - 638 060**



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ENVIRONMENTAL AUDIT CERTIFICATE

This is to certify that we have conducted an Environmental Audit in City Engineering College, Doddakallasandra, Off Kanakapura Road, Next to Gokulam Apartment, Bangalore - 560 062, Karnataka on 3rd June, 2024. This audit process highlights the present CO₂ emission and methods adopted to neutralize the same in the college campus.

S.No.	Description	Type of fuel and their conversion process	
		Electrical energy consumed	Diesel
1	Annual Energy Consumption	144517.38 kWh	3552.3 lit
2	CO ₂ Emission standards	0.95 kg/kWh	2.68 kg/lit
3	Total CO ₂ emission(tonne/Annum)	146.812 tonnes	
4	Total No. of students and staff	1396	
5	Per capita CO ₂ emission per year	0.105 tonne (+)	
6	No. of Matured Trees (1 tree absorbs 22 kg CO ₂ /year)	116	
7	CO ₂ neutralised due to matured trees (tonne/Annum)	2.55 tonnes	
8	CO ₂ to be neutralised per capita per year	0.103 tonnes(-)	

Systems Audited

- ✓ Electricity consumption
- ✓ Diesel consumption

Systems Inspected

- ✓ Solid Waste handling & Management
- ✓ Usage of chemical, salts & acids
- ✓ RO system

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ENERGY AUDIT CERTIFICATE

This is to certify that, we have conducted an **Energy Audit** in **City Engineering College**, Doddakallasandra, Off Kanakapura Road, Next to Gokulam Apartment, Bangalore - 560 062, Karnataka on 3rd June, 2024. The audit team has identified energy saving measures and the summary of Energy Audit Process is given below.

S.No.	Description	Parameters
1	Annual Energy/ fuel Consumption	3552.3 litres diesel & 144517.38 kWh electricity
2	Present Annual Energy Cost	Rs. 19,44,674.96
3	Proposed cost Savings due to the replacement 100 fans with BLDC fans	Rs. 75,000.00
4	Proposed cost savings per year due to the installation of 50 kW solar PV Plant.	Rs. 4,62,000.00
5	Initial Investment Required	Rs. 19,00,000.00
6	Total savings ((3)+(4))	Rs. 5,37,000.00
7	Payback period in years	3.5

Equipment/Systems Audited

Electrical Network
Wind Mill - 5 kW SR TPV System
Inverter, UPS and Battery System
Lighting, Fans & Air Conditioning System
Diesel Fuel Consumption

Audited and accounted for June 2023 to May 2024

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12/06/2023

ENERGY AUDIT CERTIFICATE

This is to certify that, we have conducted an Energy Audit in City Engineering College, Doddakallasandra, Off Kanakapura Road, Next to Gokulam Apartment, Bangalore - 560 062, Karnataka on 09th June, 2023. The audit team has identified energy saving measures and the summary of Energy Audit Process is given below.

S.No.	Description	Parameters
1	Annual Energy/ fuel Consumption	1480.3 litres diesel & 50456 kWh electricity
2	Present Annual Energy Cost	Rs. 6,45,258.00
3	Proposed cost Savings due to the replacement 100 fans with BLDC fans	Rs. 75,000.00
4	Proposed cost savings per year due to the installation of 50 kW solar PV Plant.	Rs. 4,62,000.00
5	Initial Investment Required	Rs. 19,00,000.00
6	Total savings ((3)+(4))	Rs. 5,37,000.00
7	Payback period in years	3.5

Equipment/Systems Audited

Electrical Network
Inverter, UPS and Battery System
Lighting, Fans & Air Conditioning System
Diesel Fuel Consumption

Audited and Accounted for January 2023 to May 2023

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ENVIRONMENTAL AUDIT CERTIFICATE

This is to certify that we have conducted an **Environmental Audit** in **City Engineering College, Doddakallasandra, Off Kanakapura Road, Next to Gokulam Apartment, Bangalore - 560 062, Karnataka** on 09th June, 2023. This audit process highlights the present CO₂ emission and methods adopted to neutralize the same in the college campus.

S.No.	Description	Type of fuel and their conversion process	
		Electrical energy consumed	Diesel
1	Annual Energy Consumption	50456 kWh	1480.3 lit
2	CO ₂ Emission standards	0.95 kg/kWh	2.68 kg/lit
3	Total CO ₂ emission(tonne/Annum)	51.9 tonnes	
4	Total No. of students and staff	851	
5	Per capita CO ₂ emission per year	0.061 tonne (+)	
6	No. of Matured Trees (1 tree absorbs 22 kg CO ₂ /year)	116	
7	CO ₂ neutralised due to matured trees (tonne/Annum)	2.55 tonnes	
8	CO ₂ to be neutralised per capita per year	0.058 tonnes(-)	

Systems Audited

- ✓ Electricity consumption
- ✓ Diesel consumption

Systems Inspected

- ✓ Solid Waste handling & Management
- ✓ Usage of chemical, salts & acids
- ✓ RO system

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Smart Solutions for
Sustainable Tomorrow

Eco Energime Engineers LLP

Certificate

This is to certify that M/s. Eco Energime Engineers LLP, Bengaluru has conducted **Surveillance Green Audit and Quality Audit** of "City Engineering College, Doddakallasandra, Off – Kanakapura main road, Bengaluru", during December 2022 to January 2023. The Audit includes water audit, energy audit, waste management audit, green campus management audit and aspects of environment audit.

The audit involves field visit, measurements and observations, verification of bills, log books, data base, maintenance registers and interview with staffs, and this gives an overview of the existing system. In an opinion and to the best of our information and according to the information given to us, said Quality Audit gives a true and fair view in conformity with auditing principles.

For Eco Energime Engineers LLP


Authorized Signatory



Smart Solutions for
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Eco Energime Engineers LLP

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This is to certify that M/s. Eco Energime Engineers LLP, Bengaluru has conducted **Green Audit and Quality Audit** of "City Engineering College, Doddakallasandra, Off – Kanakapura main road, Bengaluru", during February 2022 to April 2022. The Audit includes water audit, energy audit, waste management audit, green campus management audit and aspects of environment audit.

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