



UNNAMALAI INSTITUTE OF TECHNOLOGY

Suba Nagar, Kovilpatti-628502

Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai

An ISO 9001:2015 Certified Institution

**Certificate for Environmental,
Energy and Green Audit
(2022-2023)**



CERTIFICATE FOR ENVIRONMENTAL AUDIT

Certificate Number: PSQC 199

This is to certify that we have conducted an ENVIRONMENTAL AUDIT in UNNAMALAI INSTITUTE OF TECHNOLOGY, Kovilpatti (PO), Thoothukudi (Dt) - 628502, Tamil Nadu during 14/03/2023 – 15/03/2023. This Audit highlights the energy balance sheet indicating various energy carriers associated with the regular activities of the institution and their CO₂ mapping.

Environmental system: CO₂ Balance sheet (2022-2023)

S.No	Energy Consumption & CO ₂ Emission			CO ₂ Neutralization		
	Description	Annual Usage	CO ₂ Emission (Tons/Annum)	Description	Annual Usage	CO ₂ Emission (Tons/Annum)
1	Electrical Energy	11372 kwh	9.66	Matured Trees	730 Nos	15.91
2	Diesel	21020 Liters	48.26			
3	LPG Consumption	228 kg	0.68			
4	Total Emission		58.60	Total Neutralized		15.91
Balance CO ₂ to be Neutralized				42.69 Tons/Annum ¹		
CO ₂ Accountability for UIT Campus				0.1255 Tons/Annum ¹		
(Calculated based on the weighted average of total strength of students, teaching and technical staff = 340)						

System Audited

Electricity Consumption	Usage of Chemicals, Salts, Acids & Cleaning Agents
Diesel Consumption (Transport + DG)	Solid and E-waste Handling & Management
LPG Consumption	RO Plant and Water distribution system

The detailed environmental aspects & impacts are presented in the Audit Report.

Authorized Auditor



G. ARIVARASAN

BEE Certified Energy Auditor (EA-21875)

Lead Auditor – ISO 14001, EMS

P S QUALITY CERTIFICATION PVT. LTD.

(Consultancy – Accreditation & Certification) Auditing & Training

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Dr. D. RAVINDRAN, M.E., Ph.D.,
Principal
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Suba Nagar, KOVILPATTI - 628 502,
Thoothukudi District



CERTIFICATE FOR ENERGY AUDIT

Certificate Number: PSQC 194

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Description/Year	2022-2023		
Annual Electricity Consumption (kWh)	11372 kWh		
Annual LPG consumption (kg)	228 kg		
Summary of Energy Conservation (ENCON) Proposals			
Description	Parameters		
	Present	After	Savings
Annual Energy Consumption	11372 kWh + 228 Kg of LPG	10235 kWh + 217 kg of LPG	1137 kWh + 11 kg of LPG
Annual Energy Cost	6.80 lakhs	6.12 lakhs	0.68 lakhs
Simple Payback Period	-	-	1.9 years

Equipment's/Systems Audited

Electrical System	Thermal System
All major electrical equipment's	Inverter, UPS and battery system
Electrical Distribution system	Diesel generators, pumps and motors
Lightings, Fans and Air conditioning system	LPG for cooking application
Solar power plant	

The detailed Energy Conservation Proposals are presented in the Audit Report.

Authorized Auditor

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CERTIFICATE FOR GREEN AUDIT

Certificate Number: PSQC 189

This is to certify that we have conducted a GREENAUDIT in UNNAMALAI INSTITUTE OF TECHNOLOGY, Kovilpatti (PO), Thoothukudi (Dt) - 628502, Tamil Nadu during 14/02/2022 - 15/02/2022. The Audit investigates the following activities.

- 1. Coverage of matured trees (nearly 730 trees available in the college campus)**
- 2. Assessment of RO plant and water distribution network**
- 3. Implemented many flowers, shrubs and indoor plants**
- 4. Future expansion of Solar PV & Thermal energy systems for regular activities**
- 5. Evaluation of solid and E-waste management system**
- 6. Evaluation of solar water heating system to pre-heat the water**
- 7. Identification of expansion of green coverage for planting more trees**
- 8. Survey on Bio-diversity and plan for improvement of Birds, Reptile and Amphibian**

The detailed campus Greenery Coverage and initiatives are presented in the Audit Report.

Authorized Auditor

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Environmental system: CO₂ Balance sheet (2021-2022)

S.No	Energy Consumption & CO ₂ Emission			CO ₂ Neutralization		
	Description	Annual Usage	CO ₂ Emission (Tons/Annum)	Description	Annual Usage	CO ₂ Emission (Tons/Annum)
1	Electrical Energy	18911 kwh	16.07	Matured Trees	690 Nos	15.04
2	Diesel	6803 Liters	15.61			
3	LPG Consumption	227 Kg	0.67			
4	Total Emission		32.35	Total Neutralized		15.04
Balance CO ₂ to be Neutralized				17.31 Tons/Annum ¹		
CO ₂ Accountability for UIT Campus				0.057 Tons/Annum ¹		

(Calculated based on the weighted average of total strength of students, teaching and technical staff = 301)

System Audited

Electricity Consumption	Usage of Chemicals, Salts, Acids & Cleaning Agents
Diesel Consumption (Transport + DG)	Biogas Plants
LPG Consumption	RO Plant and Water distribution system
Solid and E-waste Handling & Management	STP and waste water utilization

The detailed environmental aspects & impacts are presented in the Audit Report.

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CERTIFICATE FOR ENERGY AUDIT

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Description/Year	2021-2022		
Annual Electricity Consumption (kWh)	18911 kWh		
Annual LPG consumption (kg)	227 kg		
Summary of Energy Conservation (ENCON) Proposals			
Description	Parameters		
	Present	After	Savings
Annual Energy Consumption	18911 kWh + 227 Kg of LPG	17020 kWh + 216 kg of LPG	1891 kWh + 11 kg of LPG
Annual Energy Cost	5.40 lakhs	4.86 lakhs	0.54 lakhs
Simple Payback Period	-	-	1.8 years

Equipment's/Systems Audited

Electrical System	Thermal System
All major electrical equipment's	Inverter, UPS and battery system
Electrical Distribution system	Diesel generators, pumps and motors
Lightings, Fans and Air conditioning system	LPG for cooking application
Solar power plant	

The detailed Energy Conservation Proposals are presented in the Audit Report.

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CERTIFICATE FOR **GREEN AUDIT**

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- 1. Coverage of matured trees (nearly 690 trees available in the college campus)**
- 2. Assessment of RO plant and water distribution network**
- 3. Implemented many flowers, shrubs and indoor plants**
- 4. Future Expansion of Solar PV & Thermal energy systems for regular activities**
- 5. Evaluation of solid and E-waste management system**
- 6. Evaluation of solar water heating system to pre-heat the water**
- 7. Identification of expansion of green coverage for planting more trees**
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Environmental system: CO₂ Balance sheet (2020-2021)

S.No	Energy Consumption & CO ₂ Emission			CO ₂ Neutralization		
	Description	Annual Usage	CO ₂ Emission (Tons/Annum)	Description	Annual Usage	CO ₂ Emission (Tons/Annum)
1	Electrical Energy	20190 kwh	17.16	Matured Trees	690 Nos	15.04
2	Diesel	4455 Liters	10.22			
3	LPG Consumption	114 kg	0.34			
4	Total Emission		27.72	Total Neutralized		15.04
Balance CO₂ to be Neutralized				12.68 Tons/Annum¹		
CO₂ Accountability for UIT Campus				0.030 Tons/Annum¹		

(Calculated based on the weighted average of total strength of students, teaching and technical staff = 419)

System Audited

Electricity Consumption	Usage of Chemicals, Salts, Acids & Cleaning Agents
Diesel Consumption (Transport + DG)	Solid and E-waste Handling & Management
LPG Consumption	RO Plant and Water distribution system

The detailed environmental aspects & impacts are presented in the Audit Report.

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Description/Year	2020-2021		
Annual Electricity Consumption (kWh)	20190 kWh		
Annual LPG consumption (kg)	114 kg		
Summary of Energy Conservation (ENCON) Proposals			
Description	Parameters		
	Present	After	Savings
Annual Energy Consumption	20190 kWh + 114 Kg of LPG	18171 kWh + 108 kg of LPG	2019 kWh + 6 kg of LPG
Annual Energy Cost	3.40 lakhs	3.06 lakhs	0.34 lakhs
Simple Payback Period	-	-	1.7 years

Equipment's/Systems Audited

Electrical System	Thermal System
All major electrical equipment's	Inverter, UPS and battery system
Electrical Distribution system	Diesel generators, pumps and motors
Lightings, Fans and Air conditioning system	LPG for cooking application
Solar power plant	

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