

BHARATH COLLEGE OF SCIENCE AND MANAGEMENT Thanjavur-613005, Tamil Nadu.





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CERTIFICATE FOR GREEN AUDIT PROCESS

This is to certify that, we have conducted a **GREEN AUDIT** in Bharath College of Science and Management, Thanjavur, Tamil Nadu, India on Date of audit 27th July 2022. This audit process investigates the following activities;

- 1. Coverage of Mature trees, bushes & shrubs
- 2. Plan to increase the green coverage and natural water bodies.
- 3. Pollution certificates for all transport vehicles.
- 4. Inspection on Rain Water Harvesting (RWH) both from buildings and road run-off.
- 5. Initiatives taken to promote green coverage inside the college campus.
- 6. Recommendation for Roof top Solar PV plant with grid inter active model.
- 7. Recommendation on Solar Thermal system for cooking application.
- 8. Solar thermal water heating system for hostel students (bathing application).
- 9. Study on effective Solid Waste Management (SWM) system.
- 10.E-waste: Collection, Segregation, Storage and Safe Disposal.
- 11. Identification of Waste to Wealth, Waste to Energy possibilities.
- 12. Planning for improvement of Indoor and Ambient Air Quality (IAQ) & Indoor Environment Quality (IEQ).
- 13. Maintaining excellent Bio-diversity & Ecology.

NOTE:

Detailed Recommendation on Green Initiatives is represented In the Audit report.

Thank You

Audit Conducted and Verified by,

STREET MBAKONAM-612 001 THANKAVUR-DIST.



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(Chennai \(\) Kumbakonam \(\) Karaikal)

CERTIFICATE FOR ENERGY AUDT PROCESS

This is to certify that, we have conducted an <u>ENERGY AUDIT</u> in Bharath College of Science and Management, Thanjavur, Tamil Nadu, Tamil Nadu, India. The audit team has come out with 8 Energy Conservation Proposals (ENCONs) and the summary of the audit processes represented as: <u>Systems Audited:</u>

Electrical System	The annual System
All major Electrical Equipment's	Inverter, UPS and Battery System
Electrical Distribution System	Diesel Generator, Pumps and Motors
Indoor & Outdoor Lightings & Fans	Energy Efficiency in Appliances
Air Conditioning System	LPG & Wood for cooking
	application

Note:

Detailed recommendations are presented In the Audit report.

Thank You

Audit Conducted and Verified by,

MATT STREET

KUMBAKONAM-612 001

THANJAYUR-DIST.

GST no: 33AYXPP0304R1ZT E-mail: <u>yojoauditnetwork@gmail.com</u> (Chennai • Kumbakonam • Karaikal)

CERTIACATE FOR ENVIRONMENTAL AUDIT PROCESS

This is to certify that, we have conducted an *ENVIRONMENTAL AUDIT* in Bharath College of Science and Management, Thanjavur, Tamil Nadu, Tamil Nadu, India on **27**th July **2022**. This audit process highlights the present CO₂ emission and methods adopted to neutralize the same in the college campus.

Environmental System: CO₂ Balance Sheet (2016-17)

S.	Annual Energy Consumption & CO ₂ Emission			Annual CO ₂ Neutralization		
	Description	Usage	CO ₂ Emission (Tons)	Description	Usage	CO ₂ Neutralized (Tons)
1.	Diesel	2,60,080 Litres	12.9	Mature Trees	2,010No's	12.9
2.	Electrical Energy	2,11,241 kwh	79.7			
3.	Wood	10.11 Tons	25.5	D.	_	16.0
4.	LPG	2,103 kg	16.6	Biogas		10.0
Total Emission			134.7	Total-Neutralized		28.9

Balance CO2 to be Neutralized = 693.7 Tons / Annum & Per Capita CO2 Consumption = 0.30 Tons / Annum¹

Environmental System: CO2 Balance Sheet (2017-18)

S.	Annual En	ergy Consumption &	CO ₂ Emission	Annual CO ₂ Neutralization			
No	Description	Usage	CO ₂ Emission (Tons)	Description	Usage	CO ₂ Neutralized (Tons)	
1.	Diesel	2,68,245 Liters	13.5	Mature Trees	996 No's	20.5	
2.	Electrical Energy	2,12,152 kWh	99.4				
3.	Wood	20.5Tons	29.1	Biogas	2,979kg	10.8	
4.	LPG	2,414kg	15.9	-	_,,,,,,,,		
	Total Emission		167.9	Total- Neutralized		31.3	
Bal	Balance CO2 to be Neutralized = 660.9 Tons/Annum & Per Capita CO2 Consumption = 0.19 Tons/Annum ²						

Environmental System: CO₂ Balance Sheet (2018-19)

Annual Energy Consumption & CO ₂ Emission			Annual CO ₂ Neutralization		
Description	Usage	CO ₂ Emission (Tons)	Description	Usage	CO ₂ Neutralized (Tons)
Diesel	1,76,329Litres	11.6	Mature	987 No's	18.6
Electrical Energy	1,45,242 kWh	172.6	Trees		
Wood	09.6Tons	15.8	Biogas	1570 kg	09.3
LPG	1,911kg	11.7			
Total E	211.7	Total- Neutralized		37.9	
	Emission Description Diesel Electrical Energy Wood LPG	Emission Description Usage Diesel 1,76,329Litres Electrical 1,45,242 kWh Energy Wood 09.6Tons	Emission Usage CO ₂ Emission (Tons) Diesel 1,76,329Litres 11.6 Electrical Energy 1,45,242 kWh 172.6 Wood 09.6Tons 15.8 LPG 1,911kg 11.7	Emission Usage CO ₂ Emission (Tons) Description Diesel 1,76,329Litres 11.6 Mature Electrical Energy 1,45,242 kWh 172.6 Trees Wood 09.6Tons 15.8 Biogas LPG 1,911kg 11.7	Emission CO2 Emission (Tons) Description Usage Diesel 1,76,329Litres 11.6 Mature Trees Electrical Energy 1,45,242 kWh 172.6 Trees Wood 09.6Tons 15.8 Biogas LPG 1,911kg 11.7

Balance CO2 to be Neutralized = **563.1** Tons / Annum & Per Capita CO2 Consumption = 0.9 Tons / Annum³

Environmental System: CO₂ Balance Sheet (2019-20)

ъ.	Emission			Annual CO ₂ Neutralization		
No ·	Description	Usage	CO ₂ Emission (Tons)	Description	Usage	CO ₂ Neutralized (Tons)
1.	Diesel	1,71,955 Litres	12.6	Mature	070 NI-2-	10.7
2.	Electrical Energy	1,71,241kWh	167.3	Trees	870 No's	10.7
3.	Wood	13.6 Tons	17.9	Biogas	985kg	6.9
4.	LPG	1,647kg	12.8			
	Total Em	210.6	Total- Neutralized		17.6	

Balance CO_2 to be Neutralized = **576.8** Tons / Annum & Per Capita CO_2 Consumption = 0.12 Tons / Annum⁴

Audit Conducted and Verified by,

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THANJAVER-DIST.