



THE COCHIN COLLEGE

Koovapadam, Kochi-2

Affiliated To Mahatma Gandhi University

Re-accredited by NAAC With B+ Grade



Fourth Cycle
NAAC Accreditation 2024

Criterion 7 Institutional Values and Best Practices

7.1 - Institutional Values and Social Responsibilities

Metric No. 7.1.2

The Institution has facilities and initiatives for *Alternate sources of energy and energy conservation measures, Management of the various types of degradable and nondegradable waste, Water conservation, Green campus initiatives, Disabled-friendly, barrier free environment*

Alternate Source of Energy

Submitted to



National Assessment and Accreditation Council



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KOCHI - 682 002

(Affiliated to Mahatma Gandhi University and Accredited by NAAC)

Website: www.thecochincollege.edu.in

email: email@thecochincollege.edu.in

Declaration on Principal

This is to declare that the institution has undertaken the following initiatives for adoption of alternate energy and conservation of energy.

Mrudula Menon V.





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In recent years, our institution has made significant progress in advancing sustainability by embracing alternative energy sources and implementing effective energy conservation strategies. These efforts have not only reduced our environmental impact but also contributed to substantial cost savings, allowing for further investment in sustainability initiatives.

1 Solar Energy Adoption

1.1 On-Grid Solar Plant

Our institution has installed both on-grid and off-grid solar energy systems. The on-grid system, connected with the Kerala State Electricity Board, provides the necessary power for our operations and contributes to the national grid. During non-working days and vacations, the system supplies the full generated electricity to the grid, and even during working days, it contributes a substantial amount of electricity, supporting national energy needs.

1.2 Off-Grid Solar Plant

We have also installed off-grid solar panels to power laboratories and select classrooms. This system generates a significant portion of the electricity required for these areas, thereby reducing our reliance on non-renewable energy sources.





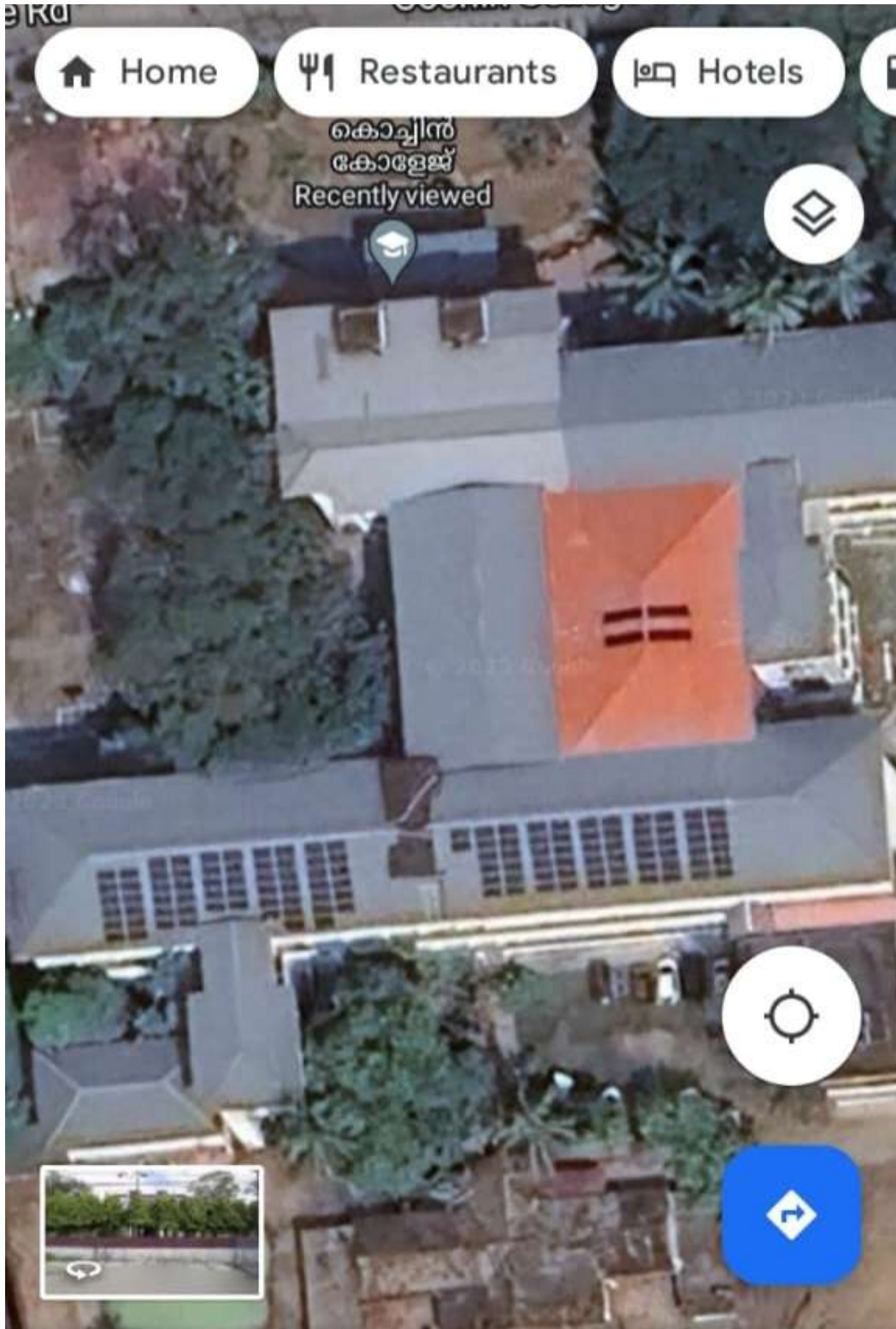
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Figure 1: Fully Solar Powered Campus

3. Infrastructure Upgrades for Energy Efficiency

1.3 LED Lighting and Smart Technologies

As part of our commitment to energy efficiency, we have upgraded our infrastructure by replacing outdated lighting systems with energy-efficient LED lights. Additionally, we have integrated smart building technologies to optimize heating, cooling, and lighting based on occupancy and the availability of natural light. These measures have significantly reduced energy consumption across the campus.

1.4 Heat Reduction and Natural Lighting

To further enhance energy efficiency, a second roof has been installed over the entire building to reduce heat absorption, thereby decreasing the need for electric fans in classrooms. In the indoor auditorium, a transparent roof has been added to allow natural light to illuminate the space, reducing the dependence on artificial lighting.





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KERALA STATE ELECTRICITY BOARD LIMITED						
DEMAND CUM DISCONNECTION NOTICE						
(As per Regulation 122 & 123 of Kerala Electricity Supply Code 2014)						
Section	[5562]-Electrical Section Thoppumpady		Phone#	0484-2231414	Customer Care	1912
Consumer#	1155629013043		Reg. Mob# 940xxxx473	Regular CC Bill	KSEBL GSTIN: 32AAECK2277NBZ1	
Name & Mailing Address			For redressing complaints/grievance approach the concerned CGRF			
JOSE T MOOKKEN PRESIDENT			South: Chairperson, CGRF(South), KSEBL, Vidyuthi Bhavanam, Kottarakkara-691506, Ph:0474-2451300			
COCHIN EDUCATIONAL SOCIETY, COCHIN COLLEGE BUILDING COCHIN 2, THOPPUMPADY			Central: Chairperson, CGRF(Central), KSEBL, 220KV SubStation, Kalamassery-683503, Ph:0484-2556500			
			North: Chairperson, CGRF(North), KSEBL, Vidyuthi Bhavanam, Gandhi Rd., Kozhikode-673011, Ph:0495-2367820			
			State Electricity Ombudsman, D.H.Rd & Foreshore Rd Jn., Near Gandhi Square, Ernakulam-682016, Ph:0484-2346488			
Bill#	5562240303170		Bill Area	M01/1	DTR	COCHIN COLLEGE
Billing Period	3/2024[Monthly]		Tariff/Phase	LT-6F/Three	Pole#	PP-30
Bill Date	01-03-2024		Due Date	11-03-2024	DC Date	30-03-2024
Contract Demand	(Nil) VA [75% : 0KV, 130% : 0KV]		Connected Load	49725 Watts	Security Deposit	Rs.50630.00
Meter#	GPIAPR180004339810		Average consumption(Monthly)			
Meter Digits	6.2		Power Unit/Zone	CUMULATIVE		
Meter Type/Owner	TOD/KSEB		KWH	500		
Last Billed Rdg. Date	Prev. Rdg. Date	Prev. Meter Rdg. Status		Prst. Rdg. Date	Prst. Meter Rdg. Status	
01-02-2024	01-02-2024	Working		01-03-2024	Working	
Power Unit	Zone	Trading	Initial Reading(IR)	Final Reading(FR)	OMF	Units*
KWH	Cumulative	Import	1443.00	1550.00	20	2140
Remarks :			Bill Details			[INR] Amount(Rs.)
Last Paid Amount - Rs.21942.00			a)	Fixed Charges	Fixed Charge[FC]	9000.00
Last Payment Date - 22-08-2024					Sub Total	9000.00
Payable amt.(excluding ACD) as on 2024-03-16 15:34:41:Rs.9038/-					Sub Total	0.00
			c)	Other Charges	Meter Rent[MR]	30.00
					Sub Total	30.00
			d)	GST	MR-CGST	2.70
					MR-SGST	2.70
					Sub Total	5.40
			e)	Round Off		-0.40
			e)	Total Amt.(Bill#5562240303170) (a+c+d+e)		9035.00
			f)	Surcharge		3.00
			g)	Reconnection Fee		0.00
			h)	Interim Bills		0.00
			i)	Arrears		0.00
			j)	Less paid/adj.		-9038.00
			k)	Less Advance		-0.00
				Net Payable(e+f+g+h+i-j-k)		0.00
Demand for 3/2024 is Rupees Nine Thousand and Thirty Five Only						

E&OE Payment Options: Cash, Cheque, DD, MO. Online: www.kseb.in (Debit/Credit Cards, Net Banking). Other Platforms: BBPS, Friends, Akshaya, CSC, NACH



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Solar OnGrid Consumer (Generator)

Consumer No.	1155623000729	Consumer Name	THE COCHIN EDUCATION SOCIETY
SPIN	556200173	Plant Capacity	40 KW
Grid Connected On	17-05-2022		

Bank Statement for 202403 (Generator)

Units Imported	1050 kWh	Units Exported	1860 kWh
Bank Opening	2149.798	Billed Consumption	0 kWh
Bank Closing	276.278		

Solar Group Consumers (Beneficiaries)

Priority	Consumer #	Section
1	1155623000729	5562
2	1155629013043	5562
3	1155628028625	5562

Generated on 23.08.24 12:07 pm



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Consumption Adjustment Report

Bill Month	Consumer #	Zone Code	Import	Export	Export + Bank	Solar Energy (Bank Energy X Factor)	Adjusted from bank	Billed Cons.	Banked Balance
202402	00729	A	570	2520	4898.77	4898.77	570	0	4328.77
	13043	A	2060	0	4328.77	4092.42	2060	0	2032.42
202403	00729	A	1050	1860	4009.8	4009.8	1050	0	2959.8
	13043	A	2140	0	2959.8	2798.19	2140	0	658.19
	28625	A	397	0	658.19	658.19	397	0	261.19

Page 1

FACTOR : 0-Reading Not Accepted/Door Lock -Applying Wheeling Charges 1/-Resetting Wheeling Charges



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4. Community Engagement and Awareness Programs

1.5 Energy Conservation Initiatives

To foster a culture of energy conservation, we have conducted various awareness programs aimed at encouraging both staff and students to be more mindful of their energy usage. These initiatives include the organization of an Energy Conservation Day, where participants learn about the sustainable use of energy resources.

1.6 Hands-On Training Sessions

We have also held hands-on training sessions to teach participants how to create LED lamps and solar-powered emergency lamps. These student-made LEDs were sold to staff, students, and the general public, further promoting energy-efficient practices within and beyond the institution.



W7X2+VRW, Cochin College Rd, Koovapadam, Chullickal, Kochi, Kerala
 Lat 9.949270°
 Long 76.252040°
 2/09/2021 11:00 AM





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Figure 2: Workshop on LED Lamp making

2 Challenges and Future Plans

2.1 Overcoming Initial Challenges

While we have faced challenges, particularly in terms of initial investment costs and technical hurdles, the long-term benefits—both environmental and financial—have proven to be well worth the effort.

2.2 Ongoing Commitment

Moving forward, our institution is committed to expanding the use of renewable energy, enhancing monitoring systems, and continuing to engage the community in vital conservation efforts. By maintaining our focus on sustainability, we aim to further reduce our carbon footprint and contribute to a greener future.





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Figure 3: Energy saving sign boards

