GOVERNMENT COLLEGE FOR WOMEN (AUTONOMOUS)
KUMBAKONAM – 612 001
Affiliated to Bharathidasan University
DST - CURIE Sponsored Institution
IV Cycle of Accreditation
Estd. 1963
0435 – 2401391
principal@gcwk.ac.in

CRITERION VI – GOVERNANCE, LEADERSHIP AND MANAGEMENT

6.5 Internal Quality Assurance System

6.5.3 - Institution has adopted Quality Assurance

6.5.3.1 Quality Initiatives & Audits

ENERGY AUDIT

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Energy Audit

In an attempt to conserve energy and reduce power consumption, energy audit had been carried out in the campus. The Energy Audit focuses on the replacement of tube lights either by CFL or LED bulbs and the replacement of old CRT monitors by LCD monitors, depending on the allocation of resources from the Government of Tamil Nadu either for IT infrastructure or for upgradation of electrical infrastructure. The following table gives an assessment of how the process has been initiated in a phased manner in the last five years.

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ENERGY AUDIT IN THE CAMPUS

1. Replacement of Tube Lights by LED/CFL Bulbs

LOCATION	DETAILS OF ENERGY CONSUMPTION	TUBE LIGHTS	REPLACED BY CFL	REPLACED BY LED	ENERGY SAVED
IQAC Room	Number of bulbs	6	12		
	Watt per bulb	40	9		
	Energy consumed by the bulbs	0.24 kW	0.108 kW		
	Energy consumed per month*	0.24x8x22 =42.24 kW	0.108x8x22 =19.008 kW		23.232 kW
Principal Chamber	Number of bulbs	11		11	
	Watt per bulb	36		30	
	Energy consumed by the bulbs	0.396 kW		0.33 kW	
	Energy consumed per month*	0.396x8x22 =69.696 kW		0.33x8x22 =58.08 kW	11.616 kW
Administrative Block	Number of bulbs	21		21	
	Watt per bulb	40		30	
	Energy consumed by the bulbs	0.84 kW		0.63 kW	
	Energy consumed per month*	0.84x8x22 =147.84 kW		0.63x8x22 =110.88 kW	36.96 kW
Council Hall	Number of bulbs	8		8	
	Watt per bulb	36		30	
	Energy consumed by the bulbs	0.288 kW		0.24 kW	
	Energy consumed per month*	0.288x8x22 =50.688 kW		0.24x8x22 =42.24 kW	8.448 kW
COE Room	Number of bulbs	11		11	
	Watt per bulb	40		20	
	Energy consumed by the bulbs	0.44 kW		0.22 kW	
	Energy consumed per month*	0.44x8x22 =77.44 kW		0.22x8x22 =38.72 kW	38.72 kW

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Strong Room	Number of bulbs	12		12	**33.79 kW**
	Watt per bulb	36		20	
	Energy consumed by the bulbs	0.432 kW		0.24 kW	
	Energy consumed per month*	0.432x8x22 =76.03 kW		0.24x8x22 =42.24 kW	
Valuation Hall	Number of bulbs	9		9	**25.344 kW**
	Watt per bulb	36		20	
	Energy consumed by the bulbs	0.324 kW		0.18 kW	
	Energy consumed per month*	0.324x8x22 =57.024 kW		0.18x8x22 =31.68 kW	
Old seminar Hall	Number of bulbs	15		15	**52.8 kW**
	Watt per bulb	40		20	
	Energy consumed by the bulbs	0.6 kW		0.3 kW	
	Energy consumed per month*	0.6x8x22 =105.6 kW		0.3x8x22 =52.8 kW	
Data Structure Lab	Number of bulbs	18		18	**12.672 kW**
	Watt per bulb	40		36	
	Energy consumed by the bulbs	0.72 kW		0.648 kW	
	Energy consumed per month*	0.72 x8x22 =126.72 kW		0.648 x8x22 =114.048 kW	
Solar powered /Sensor based Street Lights	Number of bulbs	4		4	**35.2 kW**
	Watt per bulb	40		0.5(multiple of LEDS)≈ 90 Watts solar panel	
	Energy consumed by the bulbs	0.16 kW		0.36 kW	

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	Energy consumed per month*	28.16 kW		63.36 kW	
Sensor based lights (COE Block)	Number of bulbs	4		4	
	Watt per bulb	40		9	
	Energy consumed by the bulbs	0.16 kW		0.036 kW	
	Energy consumed per month *	0.16x8x22 =28.16 Kw		0.036x8x22 =6.336 Kw	**21.824 kW**
D- CIF (DST-CURIE LAB)	Number of bulbs	12		12	
	Watt per bulb	40		36	
	Energy consumed by the bulbs	0.48 kW		0.432 kW	
	Energy consumed per month *	0.48x8x22 =84.48 kW		0.432x8x22 = 76.032 kW	**8.448 kW**
Total Energy Saved = 309.054 kW					

- Assuming that the college works for 8 hours per day and 22 working days per month.
- Replacement of Conventional lights with Energy Efficient LED lights has been done in a phased manner.

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2. Replacement of CRT Monitors by LCD Monitors

Monitor Screen size	Number of CRT Monitors	Number of LCD Monitors	Energy Consumption in CRT Monitors	Energy Consumption in LCD Monitors	ENERGY Saved
14"	70	70	360 WATT	200 WATT	14.4 KW
15"	14	14	360 WATT	200 WATT	
17"	06	06	360 WATT	200 WATT	
TOTAL	**90**	**90**	**32.4 KW**	**18 KW**	

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