Evidence(s)

THE-Impact Ranking

HEI: TRIDENT ACADEMY OF TECHNOLOGY
COUNTRY: INDIA
WEBSITE: https://tat.ac.in/activities/
SDG 7: AFFORDABLE AND CLEAN ENERGY

7.2.4 Plan to Reduce Energy Consumption:

	
Plate 7.2.4.a Solar based street light	Plate 7.2.4.b 8kW Solar panel
	
Plate 7.2.4.a. Solar street light	ate 7.2.4.b. BLDC fan

Evidence(s)

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Plate 7.2.4.c. Common charging point	

Description:

Trident College has demonstrated a proactive commitment to energy efficiency and reducing power consumption through its ongoing annual replacement program. The college systematically identifies and replaces outdated, energy-intensive, and low-efficiency equipment, customized to meet the specific needs of its facilities. This structured approach consistently yields a 10% reduction in electricity consumption each year. Trident College has rigorously implemented this energy-saving policy since 2020, achieving cumulative electricity savings that exceed 15% of annual consumption by 2025.

- **Solar-Powered Street Lights (Plate 7.2.4.a):** Trident College has upgraded all street lights to solar-powered LED models, with 75 solar-based lights now illuminating the campus. This switch supports energy efficiency and sustainable lighting.
- **BLDC Fan Installation (Plate 7.2.4.b):** To improve energy efficiency, Trident College has replaced conventional fans with energy-efficient BLDC fans in various campus areas, significantly reducing electricity consumption.
- **Common Charging Point (Plate 7.2.4.c):** The campus now includes a common charging point that supports students and staff using eco-friendly electric scooters and other devices, encouraging the use of sustainable transport options.

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The energy-saving plans for 2023-2024 include the following:

IMPLEMENTATION OF 35W FAN

Sl	Location/Identification	Ceiling Fan- 50W	Bracket Fan 45W	Ceiling Fan- 35W
1	Guest House	71	1	
2	Boys Hostel	174		
3	Girls Hostel	212		
4	Academic Building	0	31	326
5	TOTAL	457	32	326

Pump Details

Sl. No.	Description Make	Unit	Pump No.-1 KS6C-0505 (Submersible Pump-2)	Pump No. -2 KOS844+ (Mono block total No-4)	Pump No.-3 KOS325+ (Mono block Total No.-2)
1	Rated Power of Motor	KW	3.7	5.5	2.2
2	Motor Eff.	%	47	50	50
3	Discharge Head	m	120-690	180-640	180-520
4	Suction Head	m	Dec-58	24-44	Dec-28
5	Pump Type	Type	Submersible	Mono block	Mono block

Other Load Details

Sl	Location/ Identification	60W Exhaust Fan	35W Exhaust Fan	82W Exhaust Fan
1	Guest House	30		
2	Boys Hostel	27		
3	Girls Hostel	26		
4	Academic Building		60	8

Inventory of Lighting

Sl.	Location/ Identification	200W-LED High Mast	10W LED	12 W LED Round	36W lights	20W LED

Evidence(s)

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1	Guest House	0	0	64	0	0
2	Boys Hostel	0	0	181	0	0
3	Girls Hostel	0	0	188	0	0
4	**Academic Building**	**69**	**179**	**194**	**315**	**61**
	TOTAL	69	179	627	315	61

Lux Measurement

Description	**Lux**	**Remark**
Class Rooms	120 to 235	Acceptable
Offices	130 to 240	Acceptable
Corridors	35 to 90	Acceptable
Washrooms	45 to 76	Acceptable
Outdoor	36 to 95	Acceptable
Computer Lab	150 to 289	Acceptable
Parking area	45 to 94	Acceptable
Canteen	69 to 185	Acceptable

Few more steps taken by Trident college to reduce energy consumptions are

1. **Plan to Limit High-Energy Appliances:** Trident College restricts the use of high-energy-consuming appliances in student hostels and staff rooms to reduce unnecessary energy consumption, promoting a more efficient energy use strategy.
2. **Scheduled Maintenance Plan:** Routine maintenance for energy-consuming equipment ensures all devices operate efficiently, reducing energy waste associated with outdated or malfunctioning equipment.

These energy efficiency plans collectively support Trident College's commitment to reducing overall energy consumption and advancing sustainable practices on campus.