

7.2.2 a - University plans to upgrade existing buildings to higher energy efficiency

ENERGY EFFICIENT APPLIANCES IN THE CAMPUS

LED Fixtures

LED light fixtures are being extensively used for all new interior renovation works in the campus. So far, 50.87 kW capacities of LED lights are fixed which provide around 70% energy saving compared to conventional lighting.

SL NO	Buildings	QTY	TOTAL WATTS
1	Auditorium	156	2059
2	Science block	250	2829
3	Aero block	458	5064
4	Main block	42	602
5	MBA block	23	597
6	First year block	7	105
7	Life science block	80	1818
8	Staff quarters	341	4295
9	Ladies hostel	284	3974
10	Campus street light	136	3730
11	Medical	21	309
12	Pharmacy	13	601
13	Gm office	27	510
14	Canteen	29	682
15	VC office	72	450
16	VC villa	27	193
17	Guest house	17	280
18	Drivers cabin	8	120
19	Staff quarters	5	45
20	Sports lighting	29	5800
21	HR office	5	60
22	Parents waiting hall	12	166
24	New architecture block	588	10288
25	Civil yard class rooms	30	450
26	CSB room Men's hostel	32	480
27	Robotics lab	22	280
28	Research scholar room chemistry	4	144
29	Food waste management plant	8	220
30	Solar street light	10	250
31	Men's hostel	182	1166
32	MBA phase 1	49	595
33	MBA phase 2	80	588
34	Computer science lab	24	250
35	Purchase office (EO)	2	30
36	CIIC block	88	1624
37	CIIC 2nd floor studio	13	225
Total		3174	50879

AC Units

With an emphasis to energy conservation, all split AC units purchased since the year 2012 are of BEE 5- star energy rating. The star rated AC units are free from ozone depleting CFC.

MODEL	QTY	TON
1.5 Ton Split 5*	29	44
2.0 Ton Split 5*	71	142
TOTAL	100	186

Old Spilt AC units and window AC units have been replacing gradually with centralized VRF AC units for energy savings. The VRF AC unit saves space, cost and electricity consumption.

Passive Infrared Motion Sensor Lights

Motion sensor lights are provided in computer science lab, staff cabins and toilets for energy savings.

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Staff Cabin



Computer lab

GREEN AUDIT REPORT

2018 – 19



B.S. Abdur Rahman
Crescent
Institute of Science & Technology
Deemed to be University u/s 3 of the UGC Act, 1956

2019

GREEN CAMPUS INITIATIVES- AUDIT REPORT

- **Roof-top Solar Power Plant I of 150kWp capacity commissioned in June 2014 at a cost of 1.32Cr.**
- **Roof-top Solar Power Plant II of 100kWp capacity commissioned in October 2014 at a cost of 62Lacs.**
- **New Roof-top Solar Power Plant III of 300kWp capacity commissioned in October 2018 at a cost of 1.20Cr.**
- **Avoided emission of greenhouse gases to the equivalent of 1105624kg CO₂ due to generation of renewable energy by Solar PV power plants.**
- **LED fixtures – of around 33KW capacity has been installed in our campus in the past 5 years.**
- **Air-conditioning split units of 5-star BEE rating is installed in various departments in the campus for a total of 203TR.**
- **All the 203 split AC units are free from ozone-depleting CFC.**
- **Solar Water heaters in Hostels and staff quarters – installed capacity 42,500 litres. This is equivalent to 240 electric geysers of various capacities. The power saving is estimated to be around 17Lacs per annum.**
- **Sewage Treatment Plant (STP) – 500KLD of water is treated and utilized for Landscaping and flushing purpose in the University and Hostels. One plant of 250KLD capacity for Men’s Hostel and another 250KLD capacity plant for University are in operation.**

- **New Bio-gas plant of 50m³ capacity for Ladies Hostel is commissioned in June 2017. The gas generated is utilized in Ladies Hostel Mess Kitchen.**
- **All existing buildings are registered with Indian Green Building Council (IGBC) for green building certification under IGBC – EB rating**
- **All New buildings constructed over the last six years and those under construction are registered with GBCI EDGE and USGBC LEED for green building certification for Gold rating.**
- **GBCI-EDGE Green building certification received for New Ladies Hostel & New staff quarters on 23.04.2018.**
- **New Crescent School of Architecture block is conceived as a Net Zero Energy building and registered under USGBC-LEED for Gold rating certification.**
- **Campus Solid Waste Management program is implemented – to segregate and recycle organic waste, paper, cartons, paper cups, soft drink tins, plastic, pet bottles, e-waste, bio-waste, etc.**
- **Use of eco-friendly cleaning chemicals are mandatory in the campus**
- **Retreading of vehicle tyres to extend the life of each tyre is being implemented with an MOU with TVS Retread**
- **MOU with ITC-WOW is in place for recycling of waste paper**
- **To reduce pollution inside campus, 55 Nos bicycles have been provided for students to commute between Men’s Hostel, Ladies Hostel and College Main gate. Battery Car and Electric Bike provided for staff.**

- **Sanitary napkin incinerator with wet scrubber (for pollution control) is installed for disposing the napkins. Wet scrubber is attached at the outlet of burner fumes where the fumes gets scrubbed in water and gets filtered to remove the harmful emissions.**
- **15 Nos new AC buses, which are BS-IV compliant vehicles, have been provided for induction into the student transport fleet from July 2018.**
- **33% of Carbon foot print is offset by the above environment – friendly measures in campus.**