7.2.2 - UPGRADE BUILDINGS TO HIGHER ENERGY EFFICIENCY

SKCET CAMPUS

The main objectives of using LED lamps instead of conventional lamps such as, Energy efficiency, Extended life, Cold temperature operation, instant-on and durability, which emits light in all directions. This directional lighting capability reduces wasted light and energy.

LIBRARY BLOCK LED LIGHT PHOTOS


SIDCO - Sugunapuram Rd, Sugunapuram, Madukkarai, Tamil Nadu 641008, India
Madukkarai
Tamil Nadu
India
Decimal
DMS
Latitude
10.937472
10°56'14" N
Longitude
76.960362
76°57'37" E


SIDCO - Sugunapuram Rd, Sugunapuram, Madukkarai, Tamil Nadu 641008, India
Madukkarai
Tamil Nadu
India
Decimal
DMS
Latitude
10.937605
10°56'15" N
Longitude
76.960289
76°57'37" E

LED LAMPS INSTALLED IN DIFFERENT LOCATIONS OF SKCET CAMPUS

In SKCET campus, we installed LEDs at different places. The main objectives of using LED lamps instead of conventional lamps such as, Energy efficiency, Extended life, Cold temperature operation, instant-on and durability, which emits light in all directions. This directional lighting capability reduces wasted light and energy.

Percentage of annual lighting power requirements met through LED bulbs

Total Number of fluorescent Lamps : 5182 Nos X 36 W = 186552W

Total Number of LED lamps : 1130 Nos

{[230 Nos X96W] + [900 Nos X36W]} = 53100W

$$Percentage\ of\ annual\ lighting\ power\ requirements\ met\ through\ LED\ \} = \frac{53100}{239652} \text{X100=22.10\%}$$

STREET LIGHT PHOTOS

Facilities for Alternate Energy Sources and Energy conservation

The exploration of alternate energy sources and the promotion of energy conservation have emerged as pivotal strategies in shaping a sustainable future. Alternate energy source sets a stage for an exploration into the realm of alternate energy sources and energy conservation, delving into significance, principles and potential pathways towards a more resilient and eco-friendly energy landscape. As an Alternate Energy Sources and Energy Conservation, Sri Krishna College of Engineering and Technology have initiated the Energy Conservation through-out the campus. The following are the Alternate Energy Sources and Energy Conservation schemes.

1. Solar Energy
2. Biogas Plant
3. Sensor based Energy Conservation
4. LED Lamps

SOLAR ENERGY

Solar Energy is utilized for water heating system to produce hot water. It can raise the water temperature to a range of 60 to 80 degrees Celsius. Employing a solarwater heater can significantly reduce electricity or fuel expenses, offering a cost- effective means of producing hot water for various purposes. Moreover, solar heatersnot only lead to substantial energy savings but also take advantage of the free energysource provided by the sun, as opposed to the costs associated with natural gas or fuel oil. Solar water heaters are installed in all housing blocks for both men and women.

Installed Capacity of Solar Water Heater

S. No.	Location	Capacity in litres	Qty Available
1	HORM – A	2000	2
2	HORM – B	2000	2
3	HORM – C	2000	2
4	HORM – D	1000	6
5	HORM – E	2000	2
6	HORW – B1	2000	2
7	HORW – B2	2000	2

- Average of 25 Litres of hot water utilized by single person per day.

  Total Strength of students in Hostel 2150

  Per day consumption of water (2150×25) : 53750 litres

- One litre of solar water heater per day saves 15 units/yearNo of units saved for per year : 53750 X 15 = 806250

Renewable energy generated and used = 806250 / 274152 × 100 = 38.8%

*Average Units consumed per year 274152

Percentage of Renewable Energy Source in SKCET: 38.87 %

Solar water heater installed in Hall of Residence Men –'A' Block: 3000LPD with 5bar(kg/cm^2)

Solar water heater installed in Hall of Residence Men –'B' Block

3000LPD with 5bar(kg/cm^2)

Solar water heater installed in Hall of Residence Men –'C' Block

3000LPD with 5bar(kg/cm^2)

Solar water heater installed in Hall of Residence Men –'D' Block

1000LPD with 5bar(kg/cm^2)

Solar water heater installed in Hall of Residence Men –'E' Block

3000LPD with 5bar(kg/cm^2)

Solar water heater installed in Hall of Residence Women– 'B1' Block

3000LPD with 5bar(kg/cm^2)

Solar water heater installed in Hall of Residence Women–'B2' Block

3000LPD with 5bar(kg/cm^2)

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COIMBATORE - 641 008.