

7.2.5 a - Energy review to identify areas where energy wastage is highest

Walk-thru Energy Audit Report
Of
Crescent Institute of Science & Technology

Vandalur, Chennai

24th Mar 2021

CONDUCTED BY



PETROLEUM CONSERVATION RESEARCH ASSOCIATION

(Under the Ministry of Petroleum and Natural Gas)

**BSNL TN Circle Building, Tower-2, Ground floor, No.16,
Greams Road,**

Chennai – 600 006 Tel: 044-28290416/8

web site: www.pcra.org

Follow us on:



ACKNOWLEDGEMENT

Petroleum Conservation Research Association is thankful to the management of **Crescent Institute of Science & Technology** for allowing us to carry out a Walk-thru energy audit at their premises. The report is based on the field observations and the data provided/observed during the study. This is the walk-thru audit only, if **Crescent** agrees then we can do the detailed energy audit also. PCRA appreciates the keen interest and involvement shown by **Dr.A.K. Kaliluthin, Deputy Director**.

PCRA is thankful to all the staff who were helpful to complete the field study successfully. Last, but not the least, we express our thanks for the hospitality and courtesy shown by the management and all the staff of the office.

Mr.R. Nesamani

Jt. Director-PCRA SR

Mr.M. Srinivasan

Sector Expert-PCRA SR

1. UNIT DETAILS

Name of the unit	Crescent Institute of Science & Technology
Address of the Unit	Seethakathi Estate, GST Road, Vandalur, Chennai, Tamilnadu-600 048.
Coordination In-charge	Mr. Rajkumar
Major product manufactured	Science College
Name of the PCRA staff involved in study	R. Nesamani & M. Srinivasan
Value of Energy Saving identified	36.2 KLOE/Annum

EXECUTIVE SUMMARY - Crescent					
ECM. No	Energy Conservation Measures	Annual Savings		Investment	Payback
		kWh	Rs.	Rs.	Months
1	Replace FTL lamps with LED lamps in Office/Class room /Hostel / Quarters	1,36,000	13,60,000	17,00,000	15
2	Replace conventional type fans with BLDC fans in Office/Class room/Hostel/Quarters	2,41,500	24,15,000	86,25,000	43
3	Replace Night lamps with LED lamps in Hostel/Quarters	43,800	4,38,000	1,25,000	3
Summary of Savings					
Total Annual kWh Savings by EB		4,21,300	42,13,000	1,04,50,000	30
Annual Savings in KLOE by EB consumption		36.2			

Savings calculation with payback period will be given after conducting detailed Energy Audit

2. Equipment's list: -

Equipment list		
Description	Capacity	Quantity in No's
Transformer	750 kVA	2
Transformer	500 kVA	1
DG	750 kVA	1
DG	500 kVA	1
Lifts	NA	23
Chiller	75TR	2
VRF AC	12 TR	12
Window/Split AC	1 ~ 2 TR	350
FTL/CFL lights	40 W	3400
Ceiling Fan	70 W	3450

3. Energy Savings: -

Total oil Savings Identified is 36.2 KLOE/Annum. It is suggested that the unit shall conduct the detailed energy audit to find out more ECM and also to get details on each ECM.

Other observations: -

- 1) Window/Split AC has to be replaced with 5 star rated AC
- 2) Chiller performance study to be conducted & replace if SEC is more
- 3) Halogen lamps to be replaced with LED lamps
- 4) Pumps performance to be study during detailed energy audit
- 5) Solar rooftop performance to be studied

===== The End of the report =====