

“Energy Audit Report”

Government G.N.A. P.G. College, Bhatapara (C.G.)



Submitted to Principal

By

Energy Audit Committee

Preface- The collection of data for energy audit of Government G.N.A. P.G. College, Bhatapara (C.G.) was conceded by team for period of 1 September 2020 to 30 August 2021. This audit was done to inquire about convenience to enhance the energy competence of the campus. The utilization of energy should drop for humanizing comfort, health and safety, to recognize the main energy proficient appliances. The energy audit survey was completed by Department of Physics. All data collected from each classroom, laboratory, Library etc. The work is done by considering how much tube light, fans, Ac's, electronic instruments in lab. How much was electric consumption in each component.

Introduction- A nation is build up in quantity and quality to the spread of educations among nation. Only a few citizens feel responsible for energy conservation. But today we are heading towards the desirable status for a developed nation. But the development should be of sustainable type and for achieving it. We are facing lack of electricity during office work, so the management of college designs regarding production of electricity and saving electricity for eco-social aspect.

In the present report, college electricity audit has been done. In this audit, it considered practical laboratory, computer lab, instrument, fan air conditioner etc are considered in this audit. We have studied total budget of the college, total economic investment of college on the electricity's and total generator. We have also studied total saving of electricity and money & requirement of energy, the exact contribution of bulb, lights, fans, computer, instruments etc in the total requirement of electricity. We studied all mentioned things by collecting exactly data from survey.

Experimental and data collections-

All required data is collected by department of physics, in all buildings, in every classroom how much fan, tubes, computer, instruments, AC etc are fixed. To survey the entire campus following data is collected and prepared table.

Total power Requirement of various equipments

Building	Name of Room & Lab	Fan	LED/ tube light/Bulb	A.C.	Fridge	Computer	Scanner /Printer	Xerox Machine/	Pump
Main Building	Classroom	111	146	6	1	75	7	3	1
	Laboratory								
	Office/Dept.								
	Washroom								
RUSA Building	Classroom	92	168	0	3	6	1	0	1
	Laboratory								
	Office/Dept.								
	Washroom								
Science Building	Classroom	65	77	0	2	5	0	0	1
	Laboratory								
	Office/Dept.								
	Washroom								
Commerce Building	Classroom	62	99	0	0	1	0	0	1
	Laboratory								
	Office/Dept.								
	Washroom								
Sports Complex	Office/Dept.	8	8	1	0	1	1	1	0
	Court								
	Stage								
	Washroom								
Auditorium	Hall	0	0	0	0	0	0	0	1
	Stage								
	Washroom								
Library Building	Reading room	10	20	0	0	11	1	1	0
	Comp. Lib.								
	Office/Dept.								
	Washroom								
Overall campus		0	16	0	0	0	0	0	0
Total Quantity		0	0	0	0	0	0	0	0
Total Power consume in 1 hour (watt) = 4.2									
Total power consume in 5 hour (watt) = 21									
Total power consumption in month (watt) = 3000									

Total Power Requirement of all instruments = 3000 units in month

Power consumption of Electricity Board

S.N.	Month	Consumption (unit KW)
1	July 2020	2713
2	August 2020	2165
3	September 2020	1910
4	October 2020	1835
5	November 2020	864
6	December 2020	1203
7	January 2021	1082
8	February 2021	2243
9	March 2021	536
10	April 2021	485
11	May 2021	315
12	June 2021	2206
Total Power consumption in Year		0
Average power consumption in month =		1463

Graphical Representation of Electricity Distribution

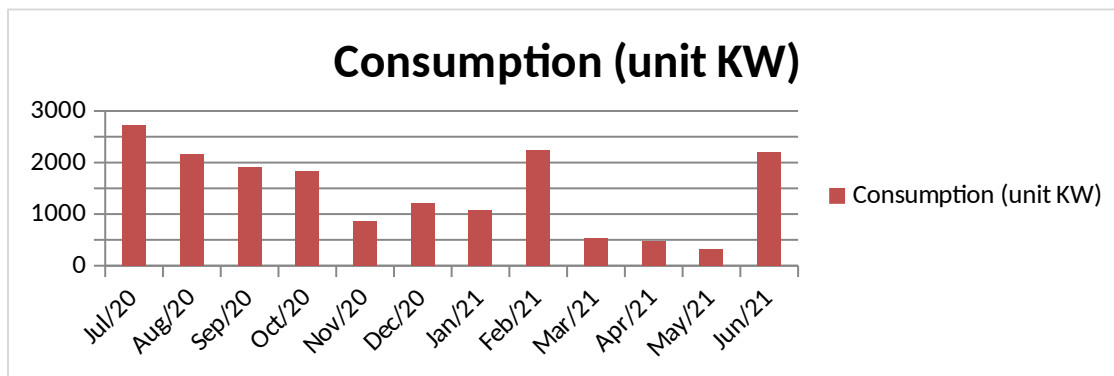
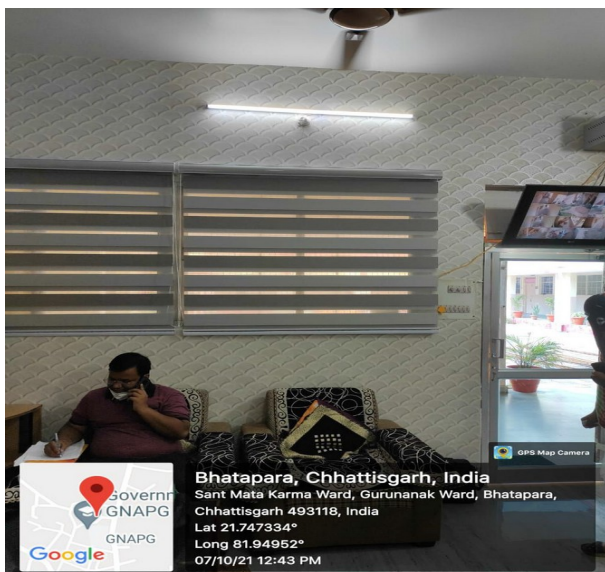
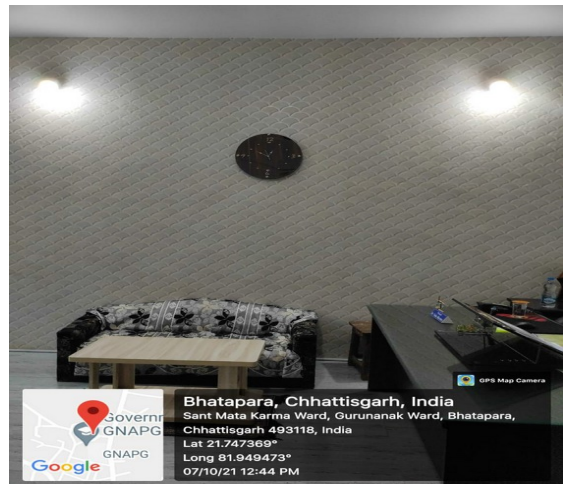


Figure: Contribution of light, fan, computer, AC and instruments in total use of energy by graph.

Total requirement of electricity generation of electricity using renewable energy resource

Power requirement by renewable energy sources	Total power requirement	Renewable energy source	Renewable energy generated & used
Unit per month	2400-3200	-	-

Photographs –



Efforts- Our College has taken few steps for energy saving in campus to aware all students, to make habit of switching off the light and fan after leaving the classroom. For implementation of the above task we pasted some posters outside of the all the classrooms.



Conclusion - In conclusion, data generated in energy audit are useful to understand the energy distribution & utilization of college. The college needs maximum 3200 units of electricity. Minimum unit is 800 per month.

Recommendation –

- To replace all CFL tube light using CED bulbs, to save more power.
- To replace CRT monitor used LED or LCD monitor.
- To have separate connections of office, computer Lab & classrooms.

Result & Discussion – So as concern the energy audit, electrically audit is main, regarding educational institute, we have collected data by considering light, tube lights, fans, computer, printers, AC and instruments. The total energy requirement is 2400-3000 units per month. That can be reduced by the given recommendation of energy audit committee.

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