



Policy on Energy Consumption:

Principles:

Energy usage is an important part of a sustainable campus. In order to reduce energy consumption without negatively affecting the environment, it is imperative that any organization concerned with the eco- friendly environment assess the aspect how it uses energy.

Objectives:

- To promote the efficient use of energy resources to minimize waste and reduce overall energy consumption.
- To minimize environmental impacts associated with energy production and consumption.
- To use of renewable energy sources such as solar and harness Solar Energy with Solar Panels
- To increase public awareness about the importance of responsible energy consumption practices

Adoption of Electricity saving Methods:

- Turning off electrical supplies, if, not in use.
- Putting computers and other electrical devices in power-saving mode.
- Updating outdated appliances and maintaining defect-free appliances.
- Replacing incandescent and CFL light bulbs with energy-efficient LED ones.

ENERGY AUDIT REPORT



S.B.M.S. COLLEGE, SUALKUCHI

OFFICE OF THE PRINCIPAL
S.B.M.S. COLLEGE SUALKUCHI, ASSAM
(SUALKUCHI BUDRAM MADHAB SATRADHIKAR COLLEGE)

An Institution of Higher Education Affiliated to Gauhati University, Provincialized by the Govt. of Assam, recognized under Section 2(f) & 12(B) of the UGC Act, 1956 and accredited with Grade B(Cycle II) by NAAC

From
Mr. Gopal Sarma, M.A.
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Date: 11/06/2023

FORWARDING

The present report is a Green Audit of SBMS College, Sualkuchi conducted internally by the Green Audit Assessment Team for the session 2022-23. This Green Audit report will be an important and meaningful documentation throwing light on sustainability of the college campus.

I am thankful to Dr. Bhaben Tanti, Professor and Head Department of Botany, Gauhati University for his guidance and suggestions to carry out this Green Audit, I also offer my thanks to Mr. Mridul Sarma, Electrical Engineer for completion of Energy Audit.

I convey my best wishes to the members of the Green Audit Team for their vision to prepare the Green Audit of the college campus and welcome our well wishers.

I hope, this Green Audit Report of the College will be a valuable documentation for our institution to go for regular monitoring of the campus environment.

Principal I/c
S.B.M.S. College
SUALKUCHI



DEPARTMENT OF BOTANY
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10 May, 2023

Certificate

This is to certify that SBMS College, Sualkuchi, Assam has conducted a detailed “Green Audit” for its campus during the academic year 2022-2023. The green audit was conducted in accordance with the applicable standards prescribed norms of the Ministry of Environment, Forest and Climate Change, New Delhi. The audit involves water, waste water, energy, air, green inventory, solid waste, etc., and gives an 'Environmental Management Plan', which the college can follow to minimize the impact on the institutional working framework. In an opinion and to the best of my knowledge and according to the information given to me, said green audit gives a true and fair view in conformity with environmental auditing principles' accepted in India.

(Bhaben Tanti)

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Certificate

This is to certify that the Energy Audit Report of SBMS College, Sualkuchi is based on original energy consumption data during the period of study (2022-2023). The necessary information, facts and data are collected and compiled by Green Audit Team consulting original records available in the college office. The information and data incorporated in the report have been thoroughly checked with spot verification for their reliability and the data used in this report are original in nature.

Mridul Sarma

Mr. Mridul Sarma
Consulting Electrical Engineer

ECO CLUB CUM GREEN AUDIT ASSESSMENT TEAM

SBMS COLLEGE



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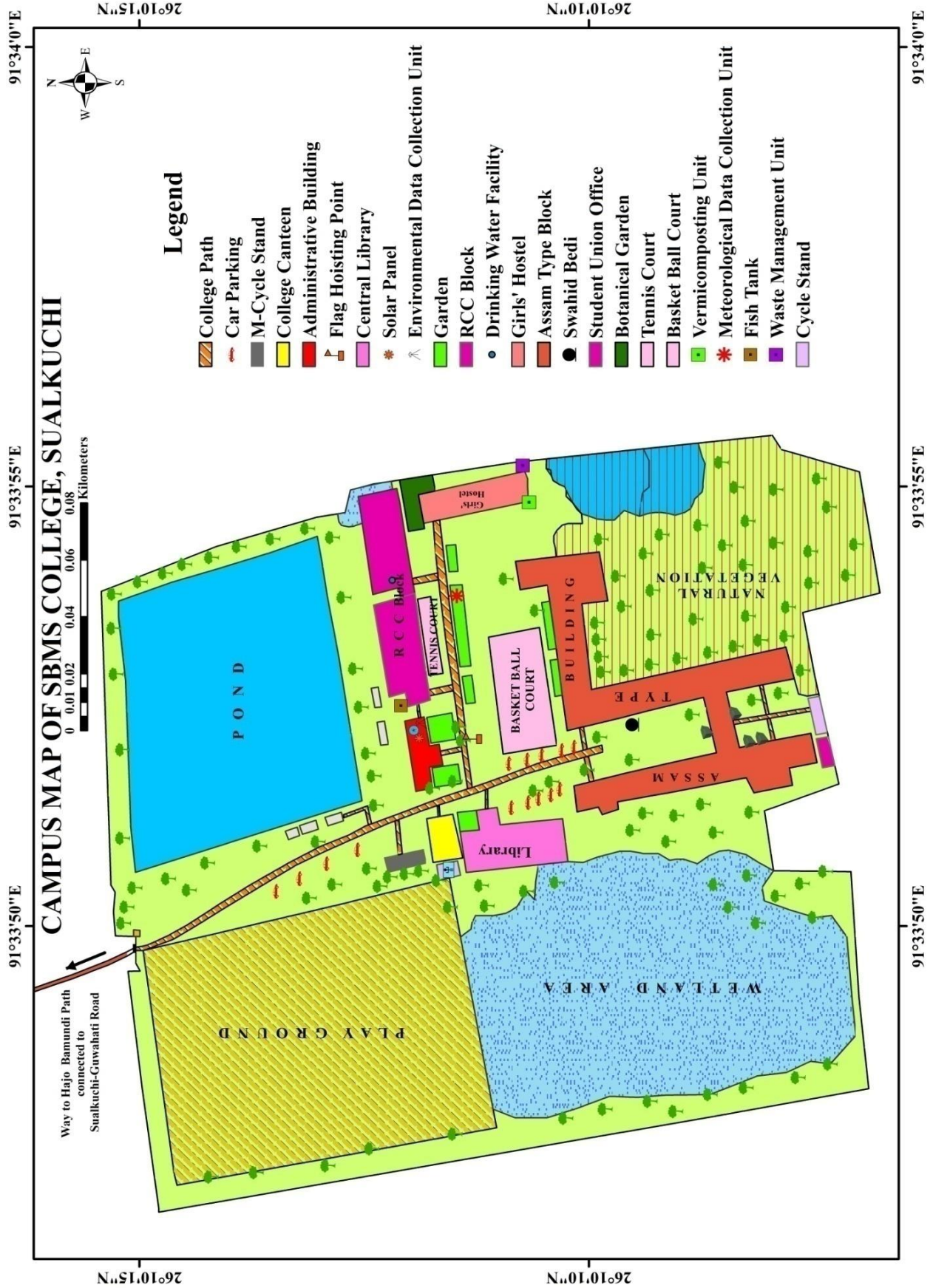
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S. B. M. S. COLLEGE, SUALKUCHI



ENERGY AUDIT REPORT

This indicator includes energy use, energy sources, energy monitoring, lighting, appliances, and cars. It is evident that energy use is an important part of a sustainable campus, thus there is no need to justify its inclusion in the assessment. Energy auditing focuses on finding ways to reduce energy consumption without negatively affecting the environment. As a result, it is imperative that any organization concerned with the environment assess how it uses energy.

Electricity Consumption:

- ❖ Avg. Electricity Consumption per year was 36300 KWh
- ❖ Avg. Electrical Consumption per month was 3025 KWh.
- ❖ Avg. Electrical Consumption per day was 99.45 KWh.
- ❖ Mean Electricity charges Rs.22,742 /- per month.

Electricity saving methods adopted in the college:

- ❖ When not in use, turn off electrical supplies. Electrical devices should be switched off while not in use.
- ❖ Put computers and other electrical devices in power-saving mode.
- ❖ Updating outdated appliances and maintaining defect-free appliances.
- ❖ Replace incandescent and CFL light bulbs with energy-efficient LED ones.

Energy Audit Observations:

- ❖ Monthly use of electricity in the college is very high because of the high range of college activities and longer working hours.
- ❖ Maintenance of a fault free appliances and replacement of old appliances, usage of LED light helps in reducing the used amount of electrical energy.
- ❖ Day to day checking of equipment's and quick correction of any problems.
- ❖ Awareness on protection of energy, water and fuel consumption among the stakeholders

Energy Consumption Data:

Assam Power Distribution Company Limited provides electricity to S.B.M.S. College. The energy consumed by S.B.M.S. College falls under HT IV Bulk Supply (Government Education) Category. The connected load is 35.0 KW and the contracted demand is 41.18 KVA. The energy consumption of the whole campus is facilitated through a Transformer having rating of 250 KVA.

Table 10: Electricity Consumer Details

Name of the Consumer	Tariff category	Consumer Account No
S.B.M.S. College	HT IV Bulk Supply (Government Education)	025000000904

The College facility also has 2 DG sets having total capacity of 20 KVA. These DG sets used mainly during the power failure of APDCL.

Table 11: Details of the DG set use in the college

S. No.	Name of the equipment's	Make	Capacity in KVA
1	DG-1	Kirloskar	20 KVA
2	DG-2	Kirloskar	20 KVA

On the other hand installation of solar panel has also been done in the college campus. The Details are given below.

Table 12: Details of the solar Panel installed in the college

S. No.	Capacity	Available area and required area
1	20 KWP	270 m ²

Table 13: List of the electrical installations in the college

S. No.	Name of equipment's	Quantities
1	Photocopier machines	4
2	Desktop and laptop computers	81
3	Projectors	14
4	Duplicator	1
5	Refrigerators	6

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6	Air conditioners	6
7	Fans	306
8	Halogen bulbs	14
9	CFL bulbs	36
10	LED lights	177
11	Tube lights	85
12	Water pumps	5
13	Aqua guard	5
14	Recording microphones	3
15	Generator	2
16	Hot air Oven	3
17	Maple Furnace	2
18	Distillation Plant	3
19	Water Bath	3
20	Binocular & Trinocular Microscope	6
21	Hote Plate	3
22	Incubator	3
23	Digital pH meter	2
24	Laminar Air Flow Chamber	1
25	CCTV (closed-circuit television)	67

Table 14: Monthly Energy Consumption during 2022-2023:

Month	KWH	PF	Maximum Demand (KVA)	Billed Demand (KVA)	Total Current Bill
June,2022	977.39	0.93	15.45	41.18	13977.42
July, 2022	1027.86	0.93	15.3	41.18	13935.32
August, 2022	718.89	0.92	12.3	41.18	12133.71
September, 2022	729.7	0.93	12.2	41.18	12367
October, 2022	1147.16	0.94	15.0	41.18	15172.4
November, 2022	2048.57	0.95	12.3	41.18	21,368.12
December, 2022	954.44	0.92	8.1	41.18	13613.27
January, 2023	1018	0.99	7.29	41.18	13953
February, 2023	1029.38	0.93	11.55	41.18	14,109.59
March, 2023	1046	0.96	10.26	41.18	14336
April, 2023	1095	0.94	13.7	41.18	15008
May, 2023	1142	0.91	14.2	41.18	15652

Recommendations:

- ❖ Energy saving through the replacement of tube lights by LED lights.
- ❖ Buy Electrical Appliances with 5-Star BEE Rating only
- ❖ Automated power switch off system should be employed.
- ❖ Switching over to green energy in fullest potential by installation of more solar panels and other renewable sources.
- ❖ Switch off light and electrical appliances when not using them.
- ❖ Switch off the power point rather than leave appliances on standby.
- ❖ Harness Solar Energy with Solar Pannels
- ❖ Conduct awareness programs among students to save energy.

Mridul Sarma

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Consulting Electrical Engineer

SOLAR PANELS

