



ENERGY AUDIT REPORT FY 2022-2023

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1 ACKNOWLEDGEMENT

TECHNO CONSULTANT team thanks the management of Saheed Anurup Chandra Mahavidyalaya for assigning the project of Energy Audit. We appreciate the co-operation extended to us for completion of the project. Our special thanks are extended to:

Principal- Sri Nimai Poddar (TIC)
IQAC Co-Ordinator– Mr. Gopaldeb Kantha

Also, our sincere thanks to teaching & non-teaching Staff of College for giving us necessary inputs to carry out this very vital project of Energy Audit. We are also thankful to other staff members who were actively involved while collecting the data and conducting field assessments.

2 DISCLAIMER

TECHNO CONSULTANT Audit Team has prepared this report for Saheed Anurup Chandra Mahavidyalaya based on input data submitted by the representatives of college complemented with the best judgment capacity of the audit team. It is further informed that the conclusions are arrived following best estimates and no representation, warranty or undertaking, express or implied is made and no responsibility is accepted by Audit Team in this report or for any direct or consequential loss arising from any use of the information, statements or forecasts in the report. If you wish to distribute copies of this report external to your Institute, then all pages must be included. TECHNO CONSULTANT, its staff and auditors shall keep this report confidential and shall not disclose any such information to any third party, except that in the public domain or required by law or relevant accreditation bodies. TECHNO CONSULTANT also confirms that during this audit, no monitoring was done with the help of instruments.

The entire report is compiled by Mr. Dev Deepta Nandy, Internal Auditor- ISO 50001:2018 (Energy Management System) Certificate No. 1-5MFFMEZ-13 dated 4th January 2019 & Carbon Footprint Auditor Ms Indrani Dey (Certificate No: 23042023007 dated 23.04.2023). On Site audit was conducted on 13th June 2023.

3 ABOUT SAHEED ANURUP CHANDRA MAHAVIDYALAYA

Saheed Anurup Chandra Mahavidyalaya, which started its journey on 16th November, 1991, as a Government Aided Co-educational Degree College affiliated to the University of Calcutta, is a renowned institution of higher education in southern West Bengal, especially in the district of South 24 Parganas. The college located in the rural hinterland of the state capital, has evolved as a seat of academic excellence and has made significant developments in the fields of sports and physical education, socio-cultural activities and NSS programmes over the past three decades. The college has been christened after Saheed Anurup Chandra Sen, a great Indian freedom fighter associated with the revolutionary uprising in Bengal, famously known as the Chittagong Armoury Raid. Anurup Chandra Sen was a distinguished member of the Chittagong Youth Revolutionary Party along with great revolutionaries like Masterda Surya Sen and many other stalwarts. Saheed Anurup Chandra Mahavidyalaya is a tribute to Shri Anurup Chandra Sen, who eventually, took shelter in the Burul village of South 24 Parganas, and joined the Burul High School as a teacher, after the uprising. As a keen educationist he inspired a group of young students from this village to pursue education zealously and sincerely, and also indoctrinated in them the values of social and moral responsibilities

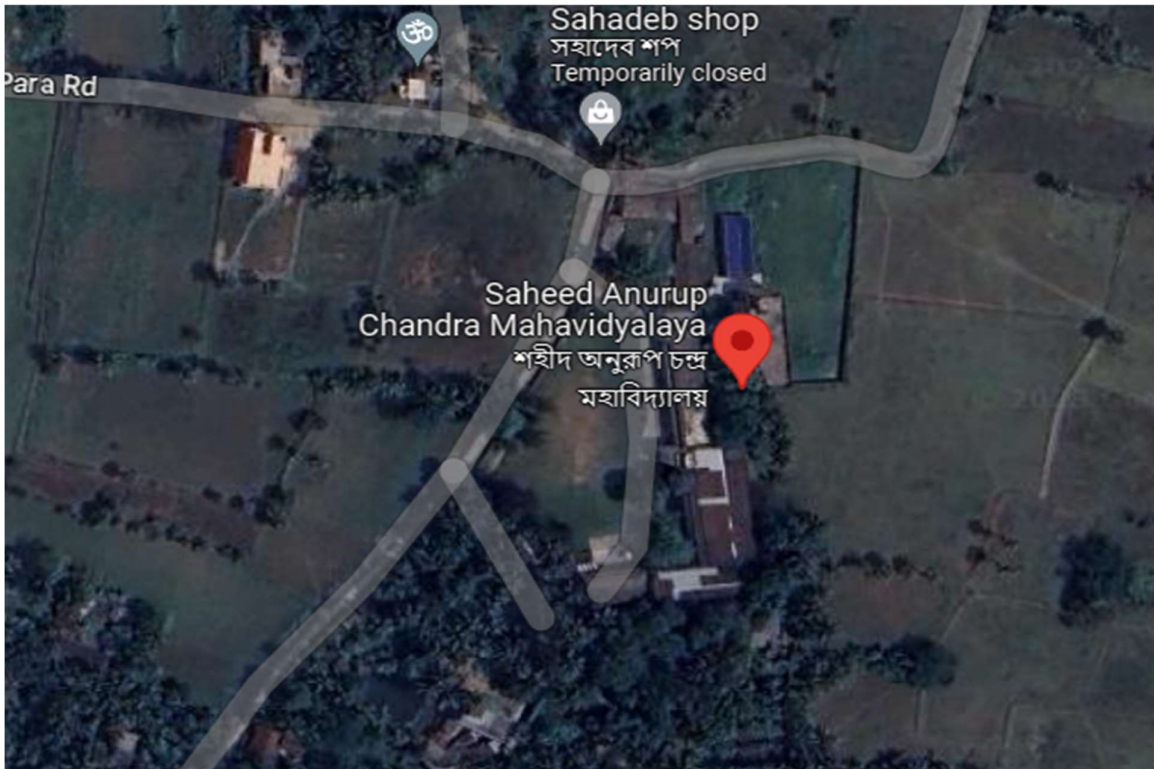
towards the country and its citizens. Unfortunately, only after four years of his stay in Burul, Anurup Chandra Sen was arrested by the British police after a tip-off from a local informer. Later, Sri Sen died in jail while fasting in protest. In his brief teaching career, Anurup Chandra Sen ignited the dream of upliftment and emancipation among the marginalised and underprivileged students of this rural hamlet through the path of knowledge and education. Late Sri Pravash Roy, one of his students and his ardent disciple, took the pioneering initiative to materialize the vision of his teacher in enabling the socially and economically deprived students (both boys and girls) of the adjoining areas to pursue higher education. The founding members of this institution recognised the inconveniences faced by the learners of the remote rural areas in receiving college-education. They dreamt of dispelling their distress through the establishment of a degree college in the Burul village itself. Their vision was shared by the local community, whose unstinted help and support extended from procuring the land for the college to its final establishment in the year 1991. Today, Saheed Anurup Chandra Mahavidyalaya, is a renowned co-educational institution of the district of South 24 Parganas, imparting higher education to more than 1500 students cutting across economic, social, religious and cultural boundaries. The college upholds the ideals of its founding members - to achieve excellence in higher education, of empowerment through knowledge, of inclusive growth for socio-economic upliftment of its students and of sustainable development of the society at large, through hard work and sincere efforts by all the stakeholders of this 30-year-old institution.

3.1 Vision

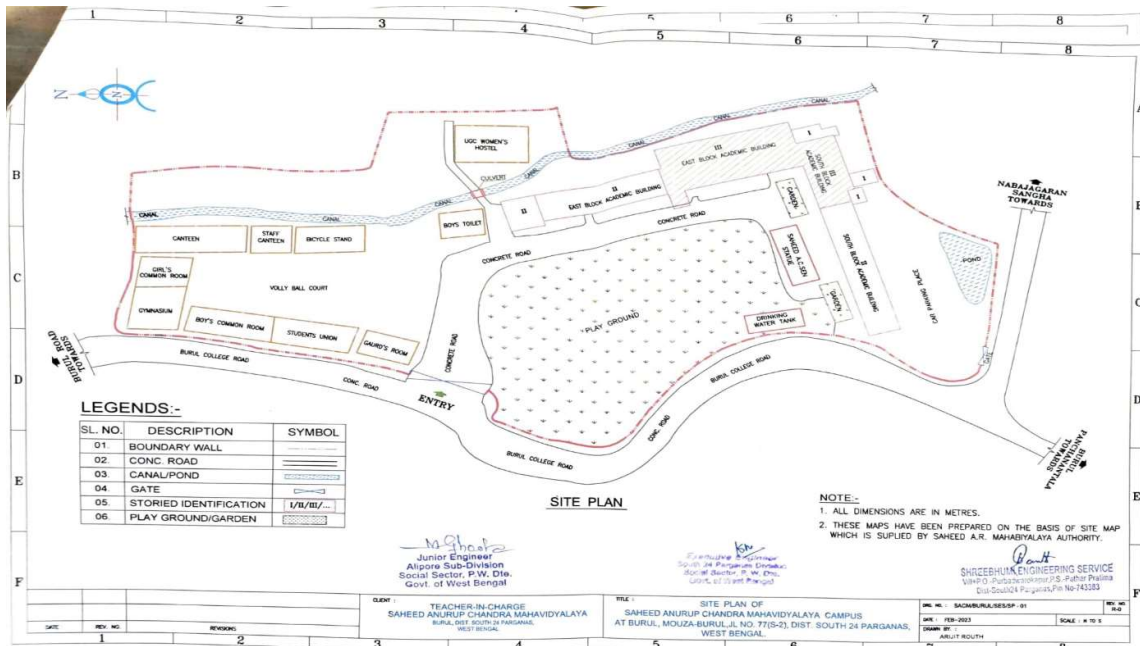
- ✚ The College is solely focussed on providing higher education to the learners of the economically and socially backward communities.
- ✚ They aspire to dispel the distresses of the students of the remote villages of the district in receiving quality college-education.

3.2 Mission

- ✚ To make quality the defining element of education through a combination of self and external quality evaluation, promotion and sustenance initiatives.
- ✚ To stimulate the academic environment for promotion of teaching-learning processes in the college.
- ✚ To encourage ethics of self-evaluation, accountability, autonomy and innovations for all round development of the college.
- ✚ To interact and collaborate with the different stakeholders of the college for quality enhancement, and sustainability.
- ✚ To maintain transparency in all aspects of the college administration through good governance practices.



Map View of Saheed Anurup Chandra Mahavidyalaya



Site Plan of Saheed Anurup Chandra Mahavidyalaya

3.3 The student and faculty strength of the college

Number	Male	Female	Total
No of students	627	922	1549
No of teachers	19	15	34
No of Non-teaching staffs	13	2	15

3.4 Physical Structure

The college is located in about 2.15 acres of land. The built-up area of the college is 2831 Sq. m.

Classrooms	16
Girl's common room	1
Gymnasium	1
Staff Room	1
Principal Room	1
Smart Class Room	10
Boys Toilets	3
Ladies Toilets	2
Male Staff Toilet	2
Female Staff Toilet	2
Laboratories	5
Conference Hall/Seminar Hall	1
Meeting room	1
IQAC Room	1
Office Room	2
Guest Room	1
Library Reading room	1
Library Stock Room	1
Union room	1
NSS Office	1
Canteen	1
Garbage collection bins	6
Store Room	1
Generator Room	1

3.5 List Of Departments

-  Bengali
-  Education
-  English
-  History
-  Political Science
-  Philosophy

- Physical Education
- Economics
- Geography
- Computer Science
- Mathematics
- Commerce

3.6 Course Offered

Subjects offered by the Faculty of Arts:

- Advanced (Honours) Courses in Bengali, English, History, Political Science, Philosophy.
- General degree courses in Bengali, English, History, Political Science, Philosophy, Economics, Geography, Education, Physical Education.

Subjects offered by the Faculty of Science:

- Advanced (Honours) Courses in Geography.
- General degree Courses in Mathematics, Computer Science, Geography, Physical Education, Economics.

Subjects offered by the Faculty of Commerce:

- General Degree Courses in Accounting & Finance.

4 SCOPE OF AUDIT

- To identify opportunities to sustainable development practices
- Energy management and savings.

5 NAME OF AUDITEE

Sl. No.	Name of Auditee	Position/Department
1	Sri Nimai Poddar	TIC
2	Mr. Gopaldeb Kantha	IQAC Co-Ordinator
3	Mr. Debobrata Sardar	Assistant Professor-Philosophy
4	Mr. Debashis Bera	Assistant Professor- History
5	Dr. Shyamasree Mondol	Assistant Professor-Bengali

6 ENERGY AUDIT & ITS OBJECTIVES

The energy audit provides the vital information base for overall energy conservation programme covering essentially energy utilization analysis and evaluation of energy conservation measures.

It aims at:

- Assessing present pattern of energy consumption.
- To reduce energy consumption to foster environment.
- To ensure optimum utilization of resources.
- Fixing of energy saving potential areas.
- Implementation of measures of energy conservation and realisation of savings.

7 METHODOLOGY

To perform energy audit, the methodology included different tools such as preparation of questionnaire, physical visit of the campus, observation, and review of the documentation, interviewing key persons and data analysis and recommendations. The study covered the present status of energy management in the campus:

8 OBSERVATIONS & RECOMMENDATIONS

8.1 Energy management

Source of Power

Electricity Power at institute is supplied by WBSEDCL (West Bengal State Electricity Distribution Company Limited).

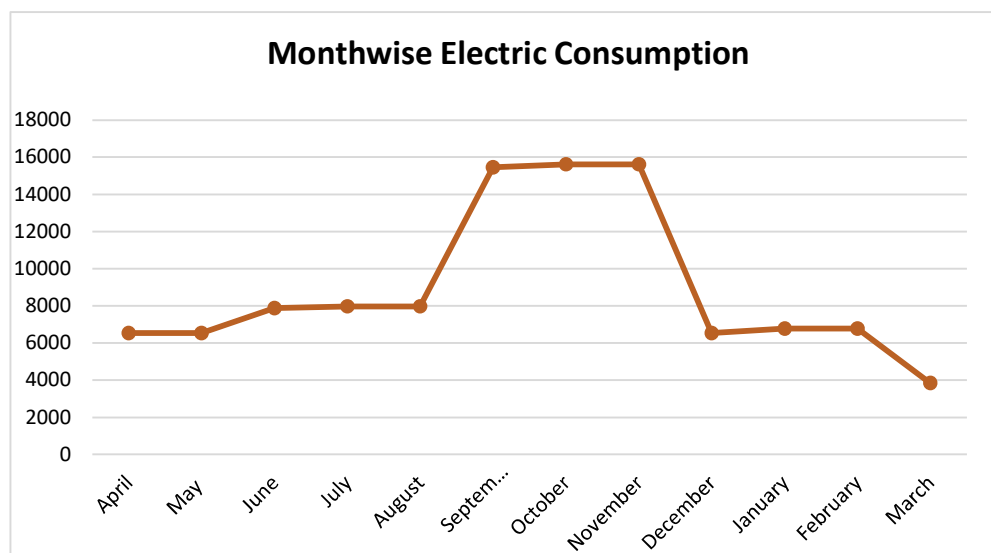
Electrical Equipment Used by College

Sl. No.	Equipment Description	Nos.
1	Air Conditioner	09
2	Desktop	97
3	Laptop	03
4	Printer without scanner	06
5	Printer with Scanner	14
6	Projector	10
7	TV	03
8	PA System	11
9	Photocopy Machine	04
10	Tube Light	182
11	LED Bulb	26
12	Celling Fan	178
13	Aquaguard	06
14	Refrigerator	01
15	Inverter	05
16	Generator	02

Electricity Consumption details

Month	Meter-1	Meter-2	Meter-3	Consumption (Unit)
April	312	5849	2259	6537.5
May	312	5849	2259	6537.5
June	304	6039	9176	7872.333333
July	312	6104	9328	7970.666667
August	312	6104	9328	7970.666667
September	306	14147	6003	15453.5
October	312	14286	6087	15612.5
November	312	14286	6087	15612.5
December	304	4831	8363	6528.833333

January	312	5007	8727	6773.5
February	312	5007	8727	6773.5
March	304	2711	4942	3838.666667



Fossil Fuel Power

Details of major Fuel consuming Machines in college campus

Sr. no	Equipment	Number/year	Consumption/year
1	LPG Cylinder	22	312.4 kg
2	DG set	2	215 ltr.
3	Two-Wheeler	25	2083 ltr. (Approx.)

Energy Management Practices Adopted by the College:

- ✚ College takes decision to replaces all the tube lights & CFL bulb by LED lights.
- ✚ College has started work on installation of solar panel at rooftop.

Recommendation

- ✚ Appoint One or Two dedicated staff/peons in the concerned section should take responsibility of monitoring where electrical things are unnecessarily switched on.
- ✚ Replacement of all the non-LED lights to LED lights has to be completed.
- ✚ Installation of solar panel has to be completed.
- ✚ Sensor can be installed in rooms for energy saving when there is no occupancy.
- ✚ Energy saving awareness spread among the students & staffs by displaying boards at appropriate place.
- ✚ Replacement of existing electric fans with BLDC fans can significantly reduce power consumption.
- ✚ To use Common or public Vehicle instead of individual vehicle to conserve fossil fuel.
- ✚ Display of energy saving poster at strategic locations within institute.

9 GOOD POINTS OBSERVED IN THE INSTITUTE:

- ✚ College takes decision to replaces all the tube lights & CFL bulb by LED lights.
- ✚ College has started work on installation of solar panel at rooftop.

10 OVERALL RECOMMENDATIONS

- ✚ Appoint One or Two dedicated staff/peons in the concerned section should take responsibility of monitoring where electrical things are unnecessarily switched on.
- ✚ Installation of solar panel has to be completed.
- ✚ Sensor can be installed in rooms for energy saving when there is no occupancy.
- ✚ Gradual replacement of existing non-LED based lights to LEDs & existing electric fans with BLDC fans to reduce power consumption.
- ✚ To use Common or public Vehicle instead of individual vehicle to conserve fossil fuel.
- ✚ Display of energy saving poster at strategic locations within institute.

11 CONCLUSIONS

Energy efficiency is the wave of the future. The world is quickly moving towards energy sustainability. At the same time, the mankind is trying to re-establish the connection it once had with nature. An energy efficient institution is a step toward the direction of renewable energy, environmental protection, and sustainable living. Having such an institution helps reduce their energy bills. Furthermore, energy efficiency means healthier and more comfortable living that is in line with nature. This audit involved extensive consultation with all the teams, interactions with key personnel. The audit has identified a few observations & some recommendations for energy saving in campus. Few things that are important to initiate for better improvement. Overall, the College Campus is well-maintained. Report compiled & prepared by Ms. Indrani Dey & reviewed by Mr. Dev Deepta Nandy.

12 REFERENCE

ISO 50001:2018 Standard, International Standard on Energy Management System.



****END OF REPORT****