



ENERGY AUDIT REPORT

2020-21 TO 2021-22

Mazbat College, Mazbat,

District-Udalguri, BTR, Assam-784507



Prepared By

**Department of Economics
Mazbat College**

Audited By

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APDCL, Central Assam Region**

ENERGY AUDIT REPORT, 2020-2022



1. Name of the College : Mazbat College, Mazbat, District- Udalguri, Assam-784507
2. Campus area : 34788 sq mtrs.
3. Built up area : 4211 sq. mts
4. Year of establishment : The 25th of August, 1988.

5. **Brief History:**

Mazbat College is a pioneer Institution of higher education, is located in Udalguri district of Assam. Established in 1988, with the permission from the Gauhati University, and later affiliated by Gauhati University under UGC Act 1956. The College is recognized by UGC under section 2(F) and 12(B). Currently the College is affiliated to Bodoland University. The College is offering a large number of subjects in Arts stream in the Under Graduate Level.

6. **Energy Auditing:**

Energy auditing is a routine procedure of monitoring power consumption of the institute performed on annual basis. As per the Energy Conservation Act, 2021, Energy Audit is defined as “the verification, monitoring and analysis of use of energy including submission of technical report containing recommendations for improving energy efficiency with cost benefit analysis and an action plan to reduce energy consumption”. For the successful implementation of an energy efficient campus, Mazbat College has focused a lot on the enhancement and awareness among the students, teachers, and other members of the institution on Energy alternatives such as solar energy. As the issue of saving our environment has attained a global prominence in the contemporary time, Mazbat College has also considered it extremely essential to work sincerely in the matter of environment consciousness parallel with green energy initiatives. In it strive for a clean, green and energy efficient campus, every possible step is taken by every member or cell of the institution to create a sense of responsibility among the students pertinent to the sustenance of healthy environment in the form of various programmes and project works.

Energy conservation:


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With the rising awareness on the necessity to save energy, the college has resorted to ways and means for saving electricity. Efforts are made to shift to solar energy phase wise.

The classrooms are in such manner that they allow sufficient light and air during class hours and as a result, much electricity is saved.

In its drive for saving energy, Mazbat College has taken steps to replace all existing bulbs and lights with LED lights phase wise. In fact, all newly constructed buildings have been equipped with LED lights and 5-star rating ceiling fans with a view to reducing the consumption of energy.

Use of renewable energy:

The college has adopted means to switch over from conventional source of electricity to renewable resources. Solar Energy Plant has been set up in the college to cater to the dire needs of various departments. The institution has requested to the Assam Power Distribution Company Limited (APCDL) to convert existing Solar Plant for Grid Connected Solar PV Power Plant with Net Metering facility. The installation work, that will soon be completed, will enable the college to shift to solar energy.

Efforts for Carbon neutrality:

With a larger green coverage, the college has always adopted all possible means to create a carbon neutral environment.

The Eco Club has been formed to maintain carbon-neutrality. The collective effort of Eco Club, NSS Unit and the Students' Union, in organizing seminars, talks and workshops, has created a platform for generating awareness among the members of the college and sustaining the efforts for an eco- friendly campus.

The college authority has adopted measures to check carbon emission in the campus by banning the burning of wastepaper, dry leaves, and other such waste products. Emission certificates from Pollution Control Board, Assam of cars and vehicles belonging to members of the college are also verified for the purpose.

E-waste management:


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E-wastes such as damaged computer parts, batteries, electronic items, electrical appliances, empty toner containers, are disposed as scrap and given away to agencies that recycle such products.

Energy Consumption Data:

The electricity supply for Mazbat College is provided by Assam Power Distribution Company Limited (APDCL). The energy consumed by Mazbat College falls under HT IV Bulk Supply (Government Education) Category. The Contracted Demand is 23.53 KVA and the connected load is 20.0 KW. The energy consumption of the whole campus is facilitated through a Transformer having rating of 63 KVA.

Consumer details:

Name of the Consumer	Tariff Category	Consumer Account No
Mazbat College	HT IV Bulk Supply (Government Education)	08600000360

The College facility also has 1 DG sets having total capacity of 220 KVA. The DG set is mainly used for power failure from APDCL.

SI No	DG Details	Make
1	30 Kva	EICHER

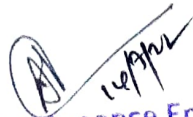
The campus also has Solar Panel installed. The details are given below:

SI No.	Capacity	Building
1	50 Kva	Mazbat College

The energy efficiency assessment was conducted for the load connected to the mains supply.

Mainly energy is used for the following purposes:

- Lighting's load
- Air conditioner
- Fan
- Operation of Water Pump


Feeder Maintenance Engineer
Dhekiajuli Electrical Sub-Division II
APDCL, CAR, Dhekiajuli


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➤ Computers




Monthly Energy Consumption:

During 2020-21:

Month	kWh	PF	Maximum Demand (kVA)	Billed Demand (kVA)	Total Current Bill (Rs)
July 2020	1231.900	36.957	4.66	23.53	17711
Aug 2020	247.300	7.419	2.40	23.53	4690
Sept 2020	277.700	8.331	2.60	23.53	5215
Oct 2020	408.690	12.260	2.98	23.53	5626
Nov 2020	435.400	13.062	4.28	23.53	11607
Dec 2020	2442.649	11.610	3.84	23.53	5487
Jan 2021	2482.399	11.930	2.66	23.53	11196
Feb 2021	2542.100	17.910	2.12	23.53	6934
March 2021	2606.389	19.290	2.62	23.53	13932
April 2021	2717.080	33.210	4.8	23.53	10345
May 2021	2808.389	27.390	5.28	23.53	8876
June 2021	2836.840	8.540	1.48	23.53	13892

During 2021-2022:

Month	kWh	PF	Maximum Demand (kVA)	Billed Demand (kVA)	Total Current Bill (Rs)
July 2021	2856.149	5.790	2.02	23.53	4213
Aug 2021	2892.489	10.900	2.84	23.53	5443
Sept 2021	2980.830	26.500	5.74	23.53	8637
Oct 2021	3102.110	36.380	7.86	23.53	10600
Nov 2021	3179.050	23.080	7.3	23.53	3120
Dec 2021	3231.070	15.610	5.28	23.53	6262
Jan 2022	3304.459	22.020	3.24	23.53	7700
Feb 2022	3393.840	26.810	2.8	23.53	8702


Feeder Maintenance Engineer
Dhekiajuli Electrical Sub-Division II
APDCL, CAR, Dhekiajuli


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March 2022	1447.276	28.876	1.44	25.50	4766
April 2022	1417.819	27.960	1.33	25.50	4696
May 2022	1404.174	27.519	1.36	25.50	4677
June 2022	1390.388	27.078	1.40	25.50	4658


Senior Maintenance Engineer
 Network Technical Job-Grades 8
 10000 600 Network


 10000 600 Network
 10000 600 Network
 10000 600 Network

Senior Performance



Fig: 1 Transformer



Fig: 2 Solar Power Plants



Fig: 3 Energy Efficient Lighting



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Fig: 4 Diesel Generator


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