





Patidarrang College



## Preface

Data collection for energy audit of the Patidarrang College, was conceded for the period of 1 August 2017 to 31 June 2022. This audit was over sighted to inquire about convenience to Progress the Energy competence of the campus. To drop of energy utilization whilst Cultivate or humanizing Comfort, health and safety were of prime anxiety. This audit required to recognize the mainly energy proficient appliances. Besides, several each day processes concerning common appliances have been provided facilitate sinking the energy expenditure. The energy audit survey was completed by Deptt. of History, Patidarrang College, Loch,,Muktapur, Kamrup, Assam. All data collected from each Class room, Office room, every room. The work is completed by considering, how much tubes, fan, electronic instruments etc.in each room. How much was participation of each component in total electricity consumption.

Co-Ordinator, IQAC  
Patidarrang College

18/05/2023

Principal I/C  
Patidarrang College  
P.O.- Loch. Dist.- Kamrup (R)



Patidarrang College



Assam Power Distribution Company Limited

## Acknowledgement

Department of History, Patidarrang College, Loch, Muktapur, Kamrup, Assam is very much thankful to the Principal Mrs. Shriyam Borkakoti, Co-ordinator, IQAC and Energy Audit committee of Patidarrang College, Loch, Muktapur, Kamrup, Assam, for their kind cooperation in the process of accomplishing the work of Energy Audit of this College.

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P.O.- Loch. Dist.- Kamrup (A)



Patidarrang College



## ENERGY AUDIT REPORT- 2017-2022

1. **Name of the College:** PatidarrangCollege, Loch,Nasatra,Kamrup, Assam-781381

2. **Campus area:** 9.82 acres

3. **Build up area:** 2081 sq. mts


4. **Date of establishment:** 31<sup>st</sup>August, 1989.

**5. Brief History:** Patidarrang College a pioneer Institution of higher education, is located about 43kms from the Guwahati city of Kamrup district. Established in 31st August, 1989, with the permission from the Gauhati University and affiliated by Gauhati University under UGC Act 1956 under section 2(F). The College offering a large number of subjects in Arts stream in the Under Graduate Kamrup, Darrang and Baksa district.

**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, Patidarrang 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, Patidarrang 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:**

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.

  
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The classrooms and other rooms 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, Patidarrang College has taken steps to replace all existing bulbs and lights with LED lights phase wise. In fact, all newly constructed building has been equipped with LED lights, AC 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 will set up in the college to cater to the dire needs of various departments during power cuts.

#### **Efforts for Carbon Neutrality:**

- With a larger green coverage, the college has always adopted all possible means to create a carbon neutral environment
- The Environment has been formed to maintain carbon-neutrality. The collective effort of Green Earth Society, Bio tech Hub 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.

  
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### **E-waste management:**

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

### **Energy Consumption Data:**

- The electricity supply for Patidarrang College is provided by Assam Power Distribution Company Limited. The Contracted Demand is 8.0 KVA and the connected load is 8.0 KW. The energy consumption of the whole campus is facilitated through a Transformer having rating of 25 KVA

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**Consumer details:**

Name of the Common Consumer No	Tariff Category	Meter	No
Principal, Patidarrang College	LT V(A)General Purpose	ASA-77374	076000099601

The campus also has a total of 5 solar streetlights installed in various places. Each of the solar streetlights are having power of 20-30 Watt.

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

**Mainly energy is used for the following purposes:**

- 1) Lighting's load =2463watt
- 2) Wi-Fi=10watt
- 3) Fan=1500watt
- 4) Operation of Water Pump=746watt
- 5) To run the Printers & Xerox Machines=500watt
- 6) Computers=600watt
- 7) Projector=150watt
- 8) CC Camera.=50watt
- 9) Halogen=500watt
- 10) Water Cooler=250watt
- 11) Water Filter=150watt
- 12) Punching Machine=20watt
- 13) Electric Clock=40watt
- 14.) Inverter=255watt

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Patidarrang College



**Monthly Energy Consumption  
During: 2020-2021**

SI NO	MONTH	ENGERY CONSUMPTION IN KWh	TOTAL BILL
01	July 2020	97.00	Rs.4527.00
02	August 2020	106.00	Rs.5275.00
03	Sept. 2020	103.00	Rs.5168.00
04	Oct.2020	102.00	Rs.5062.00
05	Nov.2020	102.00	Rs.5070.00
06	Dec.2020	103.00	Rs.5168.00
07	January 2021	102.00	Rs.5162.00
08	Feb.2021	102.00	Rs.5271.00
09	March 2021	103.00	Rs.5210.00
10	April 2021	104.00	Rs.5290.00
11	May 2021	105.00	Rs.5093.00
12	June 2021	105.00	Rs.5282.00

**Monthly Energy Consumption  
During: 2021-2022**

SI NO	MONTH	ENGERY CONSUMPTION IN KWh	TOTAL BILL
01	July 2021	101.0	Rs.5271.00
02	August 2021	105.0	Rs.5271.00
03	Sept. 2021	104.0	Rs.5271.00
04	Oct.2021	102.0	Rs.5271.00
05	Nov.2021	106.0	Rs.5271.00
06	Dec.2021	104.0	Rs.5271.00
07	January 2022	103.0	Rs.5271.00
08	Feb.2022	103.0	Rs.5271.00
09	March 2022	105.0	Rs.5271.00
10	April 2022	104.0	Rs.5271.00
11	May 2022	107.0	Rs.5271.00
12	June 2022	110.0	Rs.5271.00

Patidarrang College

*[Signature]*  
Principal I/C  
Patidarrang College  
P.O.- Loch. Dist.- Kamrup (R)





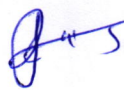
Patidarrang College

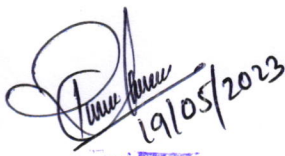


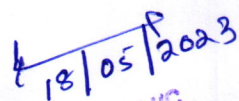
**Monthly Energy Consumption  
During: 2022-2023**

SI NO	MONTH	ENERGY CONSUMPTION IN KWh	TOTAL BILL
01	July 2022	501.00	Rs.5161.00
02	August 2022	542.00	Rs.5247.00
03	Sept. 2022	641.00	Rs.5137.00
04	Oct.2022	158.00	Rs.2361.00
05	Nov.2022	542.00	Rs.5174.00
06	Dec.2022	626.00	Rs.5820.00
07	January 2023	626.00	Rs.5945.00
08	Feb.2023	565.00	Rs.5611.00
09	March 2023	554.00	Rs.4969.00
10	April 2023	552.00	Rs.5036.00

Average monthly power consumption=85.0

  
Co-Ordinator, IQAC  
Patidarrang College

  
19/05/2023  
Junior Manager  
Baihata Chariali Elect. Sub-Divn.  
APDCL LAR, Baihata Chariali

  
18/05/2023  
Principal IQC  
Patidarrang College  
P.O.- Loch. Dist.- Kamrup (R)

(Rajkumar Chakravorty)  
Junior Engineer (Electrical)  
Assam Power Distribution Company Limited,  
BaihataChariali Electrical Sub Division, Kamrup, Assam-781381



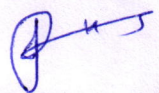
**Experimental and Data Collection:**


All required data is collected by Department of History, Patidarrang College. As per survey the following data are collected.

**Table-I**

**Total Energy requirement in various Departments:**

Fan	LED Light	Tube Light	Halogen	Computer	Printer	Projector	Xerox Machine	CC Camera
61	07	60	5	11	3	1	1	40

  
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Principal, Patidarrang College  
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# Assam Power Distribution Company Limited

NAME OF ELECTRICAL SUB-DIVISION / IRCA : BAIHATA


CIN: U40109AS2003SGC007242

GSTIN: 18AABCL1354J1ZJ

ELECTRICITY BILL

Website: www.apdcl.org

Centralized Customer Care Number: 1912

Consumer Name: PRINCIPAL PATI DARRANG COLLEGE	<b>Consumer Number: 07600099601</b>	<b>Bill Amount: 5820.0</b>
Address: MUKTAPUR	Old Consumer Number: 005482	<b>Due Date: 19-Jan-2023</b>
	DTR Number: 2015	Bill Number: 901709529
	Pole Number :000	Bill Period: 01-Dec-2022 To 31-Dec-2022
	Connected Load in KW: 8.0	Bill Date : 04-Jan-2023
Contact Number : 7002310874	Contracted Demand in KVA: 8.0	Number of Days: 31
Email :	Load Security:10768.0	Meter Status: Defective
Tariff Category: LT V(A) GENERAL PURPOSE (OTHER	Meter Number: ASA-77374	Billing Status: ESTIMATED
Supply Voltage Level: LT		
		076000099601

## Meter Reading Details

Reading Type	Meter Number	MF	Previous Reading in KWh	Previous Export in KWh	Current Reading in KWh	Current Export in KWh	Difference Reading in KWh	Difference Export in KWh
KWH ( Normal )	ASA-77374	1.0	27686.0	0.0	27686.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	0.0	0.0	0.0

Units Consumed	PF Penalty/Rebate	LT Metering Penalty @ 3%	DTR Penalty @ 10%	HT Rebate @ 3%	Billable Units in KWh
626.0	0.0				626.0
0.0	0.0				0.0
Recorded Demand (in KVA)	0.0	Maximum Demand (in KVA)	0.0	Billing Demand (in KVA)	8.0
Power on Hours	0.0	<b>Freeze Amount</b>	<b>0.0</b>	Availability Percentage	Average Power Factor
					85.0

## Billing Details

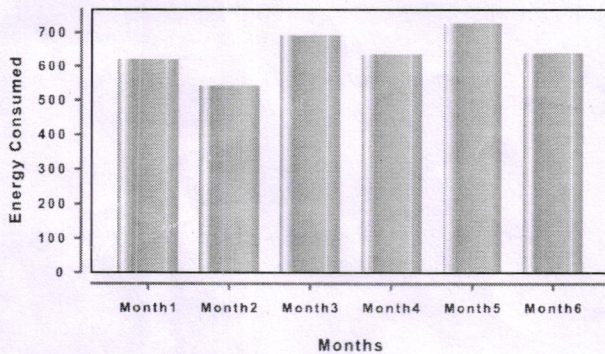
Current Demand	Outstanding Amount	Adjustment Amount	Government Subsidy	Solar Rebate	Net Bill Amount
Rs. 5820.08	Rs. 0.00	Rs. 0.00	Rs. 0.0	0.0	<b>Rs. 5820.0</b>
					<b>In Words: Rupees Five Thousand Eight Hundred Twenty Only</b>

PLEASE PAY YOUR BILL ON TIME AND HELP US TO SERVE YOU BETTER

### Charges Breakup

Details	Units	Rate	Amount
Energy Charge	626.0	6.55	4100.30
	0.0	0.0	0.00
	0.0	0.0	0.00
<b>Total Energy Charge</b>			<b>4100.30</b>
Energy Charge Re-Estimated			0.00
Demand/Fixed Charge	8.0	155.0	1263.78
FPPPA Charge		0.30	187.8
Electricity Duty		5.0	268.2
Govt. Subsidy		0.0	0.0
Meter Rent		175.0	0.0
Transformer M D Charge			
Overdrawal Penalty			0.0
Adjustment Amount			0.0
Charges for dishonoured cheque			0.0
Arrear Principal			0.0
Arrear Surcharge			0.0
Current Surcharge			0.0
Misc. Arrear			0.0
<b>Rebate if paid before due date</b>			<b>0.0</b>
<b>Payable amount before due date</b>			<b>5820.0</b>
<b>Payable amount after due date</b>			<b>5820.0</b>

### Energy Consumption (Last Month's Bill)



Checked by E&OE:

Prepared by: eSuidha

Signature with seal

18/05/2023  
Principal  
Patidarrang College  
D.O. - Loch. Dist. - Kamrup (P)