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Date: 17/08/2025

CERTIFICATE

This is to certify that we have conducted Energy Audit at D Y Patil International University Akurdi, Pune as per the guidelines of Maharashtra Energy Development Agency (www.mahaurja.com) in the year 2024-25.

The University has already adopted **Energy Efficient** practices like:

- Usage of Energy Efficient LED Fittings
- Usage of Energy Efficient BEE STAR Rated equipment
- Installation of **350 kW** Roof Top Solar PV Power Plant.

We appreciate the support of Management, involvement of faculty members and students in the process of Energy Conservation & making the campus Green.

Nutan Urja Solutions,



K G Bhatwadekar,

Certified Energy Auditor,

EA - 22428



Report
On
Energy Audit
At
D. Y. Patil International University
Akurdi, Pune
(Year 2024-25)



D Y PATIL
INTERNATIONAL
UNIVERSITY
AKURDI PUNE

Prepared by
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Acknowledgement

We at Nutan Urja Solutions, Pune, express our sincere gratitude to the management of D Y Patil International University Akurdi, Pune for awarding us the assignment of Energy Audit of their university premises.

We hope that the recommendations stated in this report will be useful and worthy of discussions to take things forward to help implementation of energy conservation measures through energy savings. While we have made every attempt to adhere to high quality standards, in both data collection and analysis through the report, we would welcome your suggestions so as to improve upon this report further.



Executive Summary

After the Field measurements & analysis, we present herewith important observations made and various measures to reduce the Energy Consumption & mitigate the CO₂ emissions. university consumes Energy in the form of Electrical Energy used for various gadgets, Office & other facilities.

1. Present Energy Consumption

In the following Table, we present the details of Energy Consumption.

Table no 2.1: Details of energy consumption

Sr no	Parameter	Energy consumed, (Units)	CO2 Emission (MT)
1	Maximum	84,335	67.47
2	Minimum	41,568	33.25
3	Average	58,920	47.14
4	Total	7,07,038	565.63

2. Energy Conservation Projects already installed

1. Usage of STAR Rated ACs at new installations
2. Usage of LED lights at indoor locations
3. Usage of LED Lights for outdoor lighting.

3. Key Observations

1. Usage of LED lights.
2. Usage of star rated equipment.
3. Maintained a good power factor.

4. Percentage of Usage of Alternate Energy

The university has installed a Roof Top Solar PV Plant. The percentage of usage of Alternate Energy to Annual Energy Requirement is 43 %.



5. Percentage of Usage of LED Lighting

The university has various Types of Light fittings. The percentage of Annual LED Lighting Usage to Annual Lighting requirement works out to be 100 %.

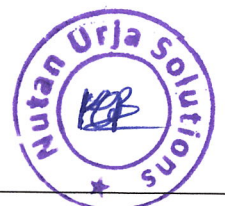
6. Recommendations

Table no 1: Recommendations for energy savings

No	Recommendation	Annual Saving potential, kWh/Annum	Annual Monetary Gain, Rs.	Investment Required, Rs.	Payback period, Months
1	Installation of 150kW grid connected PV panel	225,000	2,475,000	7,500,000	36
	Total	225,000	2,475,000	7,500,000	36

7 Notes & Assumptions

1. Daily working hours-10 Nos
2. Annual working Days-300 Nos
3. Average Rate of Electrical Energy : **Rs 11/- per kWh**



Abbreviations

CFL	:	Compact Fluorescent Lamp
FTL	:	Fluorescent Tube Light
LED	:	Light Emitting Diode
V	:	Voltage
I	:	Current
kW	:	Kilo- Watt
kWh	:	kilo-Watt Hour
kVA	:	Active Power



1. Introduction

D. Y. Patil International University, Akurdi, Pune (DYPIU) has recently become operational as a State Private University and has rolled out with a fundamental mission of covering a remarkable milestone in the history of Higher Education in India. It further aims to convert itself into a Private University of global value by developing socially relevant and contemporary outcome-based programs, carrying out inter and intra disciplinary research in thrust areas, enhancing the scope of collaborations for research, and boosting faculty and student exchange programs worldwide. Also, by its acute focus on empowerment through Education and Academic Excellence, it aspires to provide an inspirational and experiential learning environment for its stakeholders and is also keenly responsive towards serving the prerequisites of the Industry and society by embedding internationalization, employability and value ruminating in all its programs.

1.1 Objectives

1. To study present level of Energy Consumption
2. To Study Electrical Consumption
3. To assess the various equipment/facilities from Energy efficiency aspect
4. To study various measures to reduce the Energy Consumption

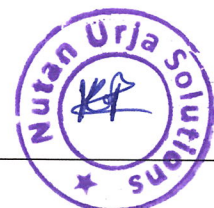
1.2 Audit Methodology:

1. Study of connected load
2. Study of various Electrical parameters
3. To prepare the Report with various Encon measures with payback analysis

1.3 General Details of University

Table No-1.1: Details of university

No	Head	Particulars
1	Name of Institution	D Y Patil International University Akurdi, Pune.
2	Address	Padmashree D. Y. Patil Educational Complex, Sector 29, Nigdi, Akurdi, Maharashtra 411044



2. Study of connected load

In this chapter, we present details of various connected electrical equipment and electrical load.

Table No-2.1: Location wise study of Electrical fittings in various buildings

No	Location	LED tube (20W)	LED Down light (12W)	Fans
Third Floor				
1	Room 301		4	1
2	Room 302		4	1
3	Room 303		4	1
4	Room 304		4	1
5	Room 305	4	4	1
6	Room 306	17		5
7	Room 307	2		
8	Room 308		8	
9	Room 309		8	1
10	Room 310		8	1
11	Room 311		8	1
12	Room 312		7	
13	Room 313	16		5
14	Room 314	4	3	2
15	Room 315	4		1
16	Room 316	3		2
17	Room 317	2		
18	Room 318	2		
19	Room 319	1		
20	Room 320	1		
21	Room 321	2		
22	Room 322	11	3	6
23	Room 323	1	1	
24	Room 324	12		4
25	Room 325	12		6
26	Room 326	7		2
27	Room 327	12		2



28	Room 328	12		3
29	Room 329	12		3
30	Room 330	12		3
31	Room 331	12		3
32	Room 332	12		3
33	Room 333	12		3
34	Room 334	10		4
35	Room 335	3	3	2
36	Room 336	3	3	2
37	Room 337	2	9	1
38	Room 338	6	6	2
39	Room 339	6	6	2
40	Room 340	10		4
41	Room 341	16	22	5
42	Room 342		4	
43	Room 343		4	
44	Room 344		4	
45	Room 345		4	
46	Room 346	7	6	
47	Room 347		6	
48	Room 348		4	1
49	Room 349		4	1
50	Room 350		4	1
51	Room 351		4	1
52	Room 352		4	1
53	Room 353	6	9	6
54	Room 354	5		2
55	Room 355	4	4	2
56	Room 356	7	10	3
57	Room 357		8	
58	Library	13	24	14
59	Wash Rooms	23		
60	Boys Room	5		2
61	Passage	68		
	Fourth Floor			
62	Room no 401		4	2
63	Room no 402		4	
64	Room no 403		4	
65	Room no 404		4	

