

GREEN AUDIT REPORT

of

Shri Wagheshwar Gramvikas Pratishthan's,
LOKNETE SHRI DADA PATIL PHARATE
COLLEGE OF PHARMACY,
Mandavgan Pharata, Taluka: Shirur, District: Pune



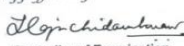
Year: 2020-21

Prepared by

ENRICH CONSULTANTS

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REGISTRATION CERTIFICATES

Regn. No. EA-8192		No. 2942
National Productivity Council (National Certifying Agency)		
PROVISIONAL CERTIFICATE		
This is to certify that Mr. / Ms. <u>Achyut Yashavant Mehendale</u> son / daughter of Mr. <u>Yashavant</u> has passed the National Certification Examination for Energy Auditors in April - 2007, conducted on behalf of the Bureau of Energy Efficiency, Ministry of Power, Government of India.		
He / She is qualified as Certified Energy Manager as well as Certified Energy Auditor.		
He / She shall be entitled to practice as Energy Auditor under the Energy Conservation Act 2001, subject to the fulfillment of qualifications for the Accredited Energy Auditor and issue of certificate of Accreditation by the Bureau of Energy Efficiency under the said Act.		
This certificate is valid till the issuance of an official certificate by the Bureau of Energy Efficiency.		
Place : Chennai, India		
Date : 10 th August 2007		Controller of Examination

BEE ENERGY AUDITOR CERTIFICATE

MAHARASHTRA ENERGY DEVELOPMENT AGENCY An ISO 9001 : 2000 Reg. no. : RQ 91 / 2482	
 Maharashtra Energy Development Agency (Government of Maharashtra Institution) Aundh Road, Opposite Spicer College Road, Near Commissionerate of Animal Husbandary, Aundh, Pune, Maharashtra 411067 Ph No: 020-35000450 Email: eee@mahaurja.com , Web: www.mahaurja.com	
ECN/2021-22/CR-14/1577	22 nd April, 2021
CERTIFICATE OF REGISTRATION FOR CLASS 'A'	
We hereby certify that, the firm having following particulars is registered with MAHARASHTRA ENERGY DEVELOPMENT AGENCY (MEDA) under given category as "Energy Planner & Energy Auditor" in Maharashtra for Energy Conservation Programme of MEDA.	
Name and Address of the firm	: M/s Enrich Consultants Yashashree, Plot No. 26, Nirmal Bag Society, Near Muktangan English School, Parvati, Pune - 411009.
Registration Category	: Empanelled Consultant for Energy Conservation Programme for Class 'A'
Registration Number	: MEDA/ECN/2021-22/Class A/EA-03
- Energy Conservation Programme intends to identify areas where wasteful use of energy occurs and to evaluate the scope for Energy Conservation and take concrete steps to achieve the evaluated energy savings. - MEDA reserves the right to visit at any time without giving prior information to verify quarterly activities performed by the firm and canceling the registration, if the information is found incorrect. - This empanelment is valid till 21st April, 2023 from the date of registration, to carry out energy audits under the Energy Conservation Programme - The Director General, MEDA reserves the right to cancel the registration at any time without assigning any reasons thereof.	
 General Manager (EC)	

MEDA EMPANELMENT CERTIFICATE

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ACKNOWLEDGEMENT

We Enrich Consultants, Pune, express our sincere gratitude to the management of Shri Wagheshwar Gramvikas Pratishthan's Loknete Shri Dada Patil Pharate College Of Pharmacy, Mandavgan Pharate, Taluka: Shirur, District: Pune, for awarding us the assignment of Green Audit of their Mandavgan campus for the Year: 2020-21.

We are thankful to all staff members for helping us during the field study.

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EXECUTIVE SUMMARY

1. Shri Wagheshwar Gramvikas Pratishthan's Loknete Shri Dada Patil Pharate College Of Pharmacy, Mandavgan Pharate, Taluka: Shirur, District: Pune consumes Energy in the form of **Electrical Energy**; used for various gadgets, Office & other facilities.

2. Energy Consumed and CO₂ Emission:

No	Parameter	Energy Consumed, kWh	CO ₂ emissions, MT
1	Total	9705	8.73
2	Maximum	1550	1.40
3	Minimum	308	0.28
4	Average	808.75	0.73

3. Various Measures Adopted for Energy Conservation:

- Usage of Energy Efficient LED fittings
- Maximum Usage of Day Lighting
- Installation of Solar Thermal Water Heating System at Hostel.

4. Usage of Renewable Energy Source:

- The College has installed Solar Thermal Water Heating System at Hostel.

5. Waste Management:

5.1 Segregation of Waste at Source:

The Waste is segregated at source. Waste Bins are kept at various points.

5.2 Sanitary Waste Management:

The College has installed Sanitary Waste Incinerator, for disposal of Sanitary Waste.

5.3 Chemicals' Storage & Fumes' Management:

Hazardous chemicals are kept away from the reach of students in the fumigation Chamber.

5.4 Liquid Waste Management:

The College has made provision of a Septic Tank, for disposal of Liquid Waste.

6. Rain Water Management:

The College has installed Rainwater Management Project. The rain water falling on the terrace is collected through pipes and is used to increase the underground water table.

7. Green & Sustainable Practices:

- Good Internal Roads
- Internal Tree Plantation
- Provision of Ramp for Divyangajan

8. Assumption:

- 1 kWh (Unit) of Electrical Energy releases **0.9 Kg of CO₂** into atmosphere

9. Reference:

- For CO₂ calculations: www.tatapower.com

ABBREVIATIONS

SWGP	:	Shri Wagheshwar Gramvikas Pratishthan
LED	:	Light Emitting Diode
kWh	:	kilo-Watt Hour
MT	:	Metric Ton
CO ₂	:	Carbon Di Oxide

CHAPTER-I INTRODUCTION

1.1 Objectives:

1. To study present Energy Consumption
2. To Study the present CO₂ emissions
3. To study Usage of Renewable Energy
4. To study Waste Management practices
5. To study Green & Sustainable Practices

1.2 Table No-1: General Details of College:

No	Head	Particulars
1	Name	Shri Wagheshwar Gramvikas Pratishthan's Loknete Shri Dada Patil Pharate College Of Pharmacy,
2	Address	Mandavgan Pharate, Taluka: Shirur, District: Pune 412 211
3	Affiliation	Savitribai Phule Pune University

CHAPTER-II

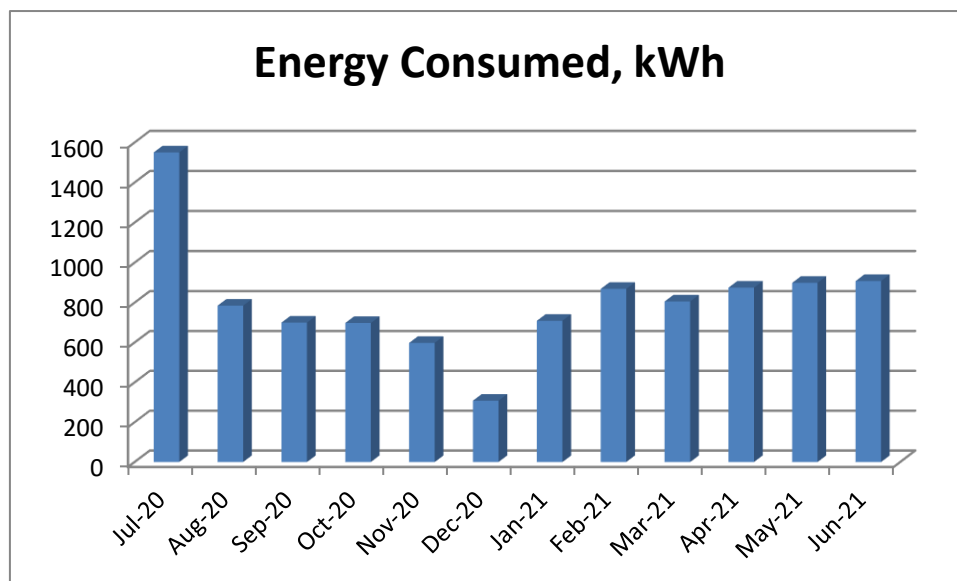
STUDY OF PRESENT ENERGY CONSUMPTION

In this chapter, we present the analysis of last year Electricity Energy Consumption

Table No 2: Electrical Energy Purchase Analysis- 20-21:

No	Month	Energy Consumed, kWh
1	Jul-20	1550
2	Aug-20	785
3	Sep-20	700
4	Oct-20	698
5	Nov-20	598
6	Dec-20	308
7	Jan-21	709
8	Feb-21	869
9	Mar-21	806
10	Apr-21	875
11	May-21	899
12	Jun-21	908
13	Total	9705
14	Maximum	1550
15	Minimum	308
16	Average	808.75

Chart No 1: To study the variation of Month wise Energy Consumed, kWh:



CHAPTER-III

CARBON FOOT PRINTING

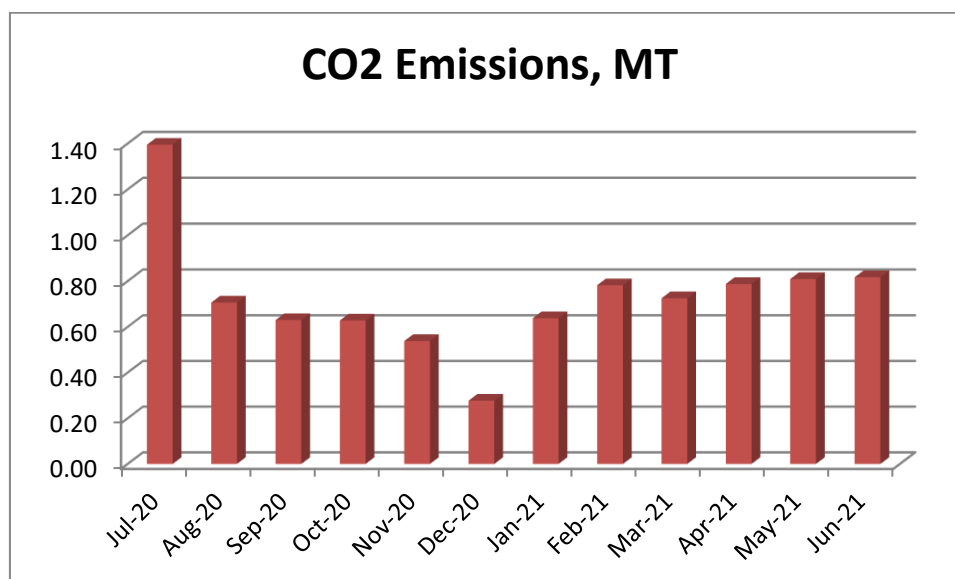
A **Carbon Foot print** is defined as the Total Greenhouse Gas emissions, emitted due to various activities. **Basis for computation of CO₂ Emissions:**

- **1 kWh** of Electrical Energy releases **0.9 Kg of CO₂** into atmosphere

Table No 3: Month wise CO₂ Emissions:

No	Month	Energy Consumed, kWh	CO2 Emissions, MT
1	Jul-20	1550	1.40
2	Aug-20	785	0.71
3	Sep-20	700	0.63
4	Oct-20	698	0.63
5	Nov-20	598	0.54
6	Dec-20	308	0.28
7	Jan-21	709	0.64
8	Feb-21	869	0.78
9	Mar-21	806	0.73
10	Apr-21	875	0.79
11	May-21	899	0.81
12	Jun-21	908	0.82
13	Total	9705	8.73
14	Maximum	1550	1.40
15	Minimum	308	0.28
16	Average	808.75	0.73

Chart No 2: Representation of Month wise CO₂ emissions:



CHAPTER-IV

STUDY OF USAGE OF RENEWABLE ENERGY

The College has installed Solar Thermal Water Heating System at the Hostel Block

The College has yet to install Roof top Solar PV Plant.

Photograph of Roof Top Solar Thermal Water Heating System:



CHAPTER-V

STUDY OF WASTE MANAGEMENT

5.1 Segregation of Waste at Source:

The Waste is segregated at source. Waste bins are located at various locations

Photograph of Separate Waste Collection Bin:



5.2 Sanitary Waste Management:

The College has installed Sanitary Waste Incinerator, for disposal of Sanitary Waste.

Photograph of Sanitary Waste Incinerator:



5.3 Chemicals' Storage & Fumes' Management:

Hazardous chemicals are kept away from the reach of students in the fumigation Chamber.

Photograph of Fumigation Chamber:



5.4 Liquid Waste Management:

The College has a Septic Tank, for disposal of Liquid Waste and is cleaned periodically.

CHAPTER-VI

STUDY OF RAIN WATER MANAGEMENT

The College has implemented the Rain Water Management Project. The College has installed Pipes from the terrace and the Rain water falling on the terrace is gathered and is used to increase the underground water table.

Photograph of Rain Water Carrying Pipe:



CHAPTER-VII

STUDY OF GREEN & SUSTAINABLE PRACTICES

7.1 Pedestrian Friendly Road:

The College has well maintained pedestrian road as to facilitate the easy movement of the students within the campus.

Photograph of Road within campus:



7.2 Internal Tree Plantation:

The College has well maintained Tree Plantation.

Photograph of Tree Plantation:



7.3 Provision of Ramp for Divyangajan:

The College has made provision of Ramp for the Divyangajan.

Photograph of Ramp for Divyangajan:

