

GREEN AUDIT REPORT

of

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

Year: 2018-19

Prepared by

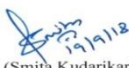
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REGISTRATION CERTIFICATES

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		 Controller of Examination
Date : 10 th August 2007		

BEE ENERGY AUDITOR CERTIFICATE

MAHARASHTRA ENERGY DEVELOPMENT AGENCY	
	Maharashtra Energy Development Agency (A Government of Maharashtra undertaking) 2 nd Floor, MHADA Commercial Complex, Opp. Tridal Nagar, Yerwada, Pune 411 006, Ph No: 020-26614393/266144403 Email: eee@mahaurja.com , Web: www.mahaurja.com
ECN/2018-19/CR-05/4174	19 th September, 2018
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	: Enrich Consultants Yashashree, Plot No. 26, Nirmal Bag Society, Near Mukhtangan English School, Parvati, Pune - 411009.
Registration Category	: Empanelled Consultant for Energy Conservation Programme
Registration Number	: MEDA/ECN/CR-05/2018-19/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 the firm at any time without giving any prior information and canceling the registration, if the information is found incorrect. - This empanelment is valid till 31st March 2021 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.	
 (Smita Kudarikar) General Manager (EC)	

MEDA EMPANELMENT CERTIFICATE

INDEX

Sr. No	Particulars	Page No
I	Acknowledgement	4
II	Executive Summary	5
III	Abbreviations	6
1	Introduction	7
2	Study of Present Energy Consumption	8
3	Carbon Foot printing	9
4	Study of Usage of Renewable Energy	10
5	Study of Waste Management	11
6	Study of Rain Water Management	12
7	Study of Green Practices	13

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: 2018-19.

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	17077	15.37
2	Maximum	1745	1.57
3	Minimum	1228	1.11
4	Average	1423.08	1.28

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 locations.

5.2 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 Practices:

- Good Internal Roads
- Internal Tree Plantation

8. Assumption:

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

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

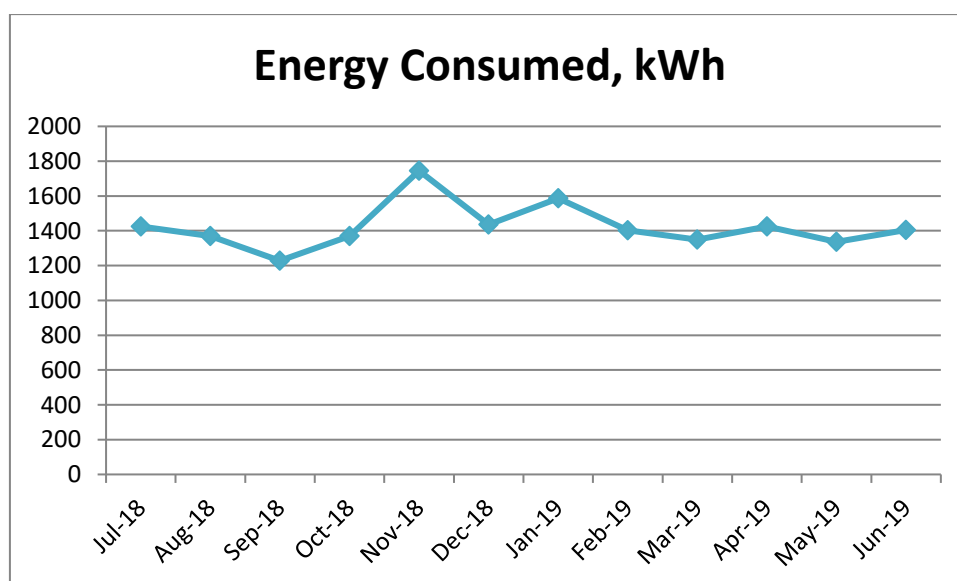
STUDY OF PRESENT ENERGY CONSUMPTION

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

Table No 2: Electrical Energy Consumption Analysis- 2018-19:

No	Month	Energy Consumed, kWh
1	Jul-18	1425
2	Aug-18	1369
3	Sep-18	1228
4	Oct-18	1369
5	Nov-18	1745
6	Dec-18	1436
7	Jan-19	1587
8	Feb-19	1402
9	Mar-19	1350
10	Apr-19	1425
11	May-19	1336
12	Jun-19	1405
13	Total	17077
14	Maximum	1745
15	Minimum	1228
16	Average	1423.08

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



CHAPTER-III

CARBON FOOT PRINTING

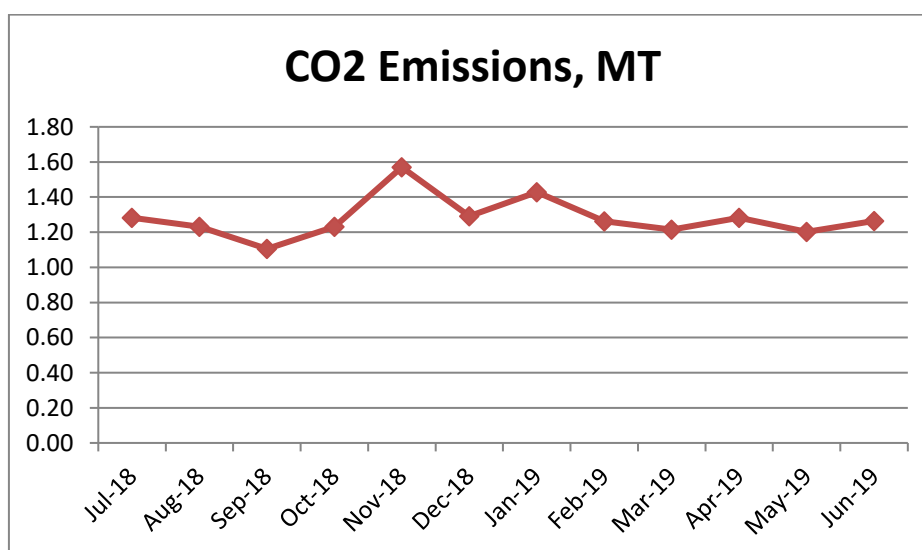
A Carbon Foot print is defined as the Total Greenhouse Gas emissions, emitted due to various activities. **Basis for computation of CO₂ Emissions:**

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	CO ₂ Emissions, MT
1	Jul-18	1425	1.28
2	Aug-18	1369	1.23
3	Sep-18	1228	1.11
4	Oct-18	1369	1.23
5	Nov-18	1745	1.57
6	Dec-18	1436	1.29
7	Jan-19	1587	1.43
8	Feb-19	1402	1.26
9	Mar-19	1350	1.22
10	Apr-19	1425	1.28
11	May-19	1336	1.20
12	Jun-19	1405	1.26
13	Total	17077	15.37
14	Maximum	1745	1.57
15	Minimum	1228	1.11
16	Average	1423.08	1.28

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 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 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:

