

**GREEN AUDIT REPORT
OF
SHREE SANTKRUPA COLLEGE OF
PHARMACY,
Ghogaon (Shivajinagar)**



Year: 2020-21

Prepared by:

Enrich Consultants

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MAHARASHTRA ENERGY DEVELOPMENT AGENCY

An ISO 9001 : 2000 Reg. no. : RQ 91 / 2462



Maharashtra Energy Development Agency

(Government of Maharashtra Institution)

Aundh Road, Opposite Spicer College Road, Near Commissionerate of Animal Husbandary,
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ECN/2021-22/CR-14/1577

22nd 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)

Enrich Consultants

Yashashree, 26, Nirmal Bag Society,
Near Muktangan English School, Parvati, Pune 411 009
Tel: 09890444795 Email: enrichcons@gmail.com

Ref: EC/SCP/20-21/02

Date: 26/05/2021

CERTIFICATE

This is to certify that we have conducted Green Audit at Shree Santkrupa College of Pharmacy, Ghogaon in the Academic year 2020-21.

The College has adopted following Green Initiatives:

- Usage of Energy Efficient LED Light Fitting
- Maximum Usage of Day Lighting
- Provision of Separate bins for Dry & Wet Waste
- The College has installed Septic Tank and is cleaned periodically.
- Implementation of Rain Water Management Project
- Maintenance of good Internal Road
- Tree Plantation in the Campus
- Creation of awareness by Display of Posters on Resource Conservation

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

For Enrich Consultants,



A Y Mehendale,
Certified Energy Auditor
EA-8192

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ACKNOWLEDGEMENT

We Enrich Consultants, Pune, express our sincere gratitude to the management of at Shree Santkrupa College of Pharmacy, Ghogaon, for awarding us the assignment of Green Audit of their Campus for the Academic Year: 2020-21.

We are thankful to all the Principal and Staff members for helping us during the field study.

EXECUTIVE SUMMARY

1. **Shree Santkrupa College of Pharmacy, Ghogaon** consumes Energy in the form of **Electrical Energy** used for various Electrical Equipment, Office & other facilities.

2. Present Energy Consumption & CO₂ Emissions:

No	Parameter/ Value	Energy Purchased, kWh	CO ₂ Emissions, MT
1	Total	7132	6.418
2	Maximum	1239	1.115
3	Minimum	377	0.339
4	Average	594.33	0.534

3. Various initiatives taken for Energy Conservation:

- Usage of Energy Efficient LED Lighting
- Maximum Usage of Day Lighting

4. Usage of Renewable Energy & CO₂ Emission Reduction:

- It is recommended to install roof-top solar PV Plant on college building.

5. Waste Management:

5.1 Segregation of Waste at Source:

The Waste is segregated at source in separate Waste Bins & is handed over for further action to Municipal Corporation.

5.2 Organic Waste Management:

The Institute has a Bio Composting Pit, to convert the Leafy Waste into Bio Compost.

5.3 Liquid Waste Management:

The College has installed Septic and is cleaned periodically.

5.4E-Waste Management:

It is recommended to dispose E-Waste through Authorized collecting agency.

5.5 Sanitary Waste Incinerator:

It is recommended to install Sanitary Waste Incinerator for sanitary waste disposal.

6. Rain Water Management:

The College has installed the Rainwater management project, the rain water falling on the terrace is collected and is used for increasing the under the underground water level.

7. Green & Sustainable Initiatives

- Maintenance of good Internal Road
- Maintenance of Internal Garden
- Display of Posters on Resource Conservation

8. Notes & Assumptions:

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

9. References:

- For CO₂ Emissions: www.tatapower.com

ABBREVIATIONS

BEE	Bureau of Energy Efficiency
kWh	Kilo Watt Hour
LPD	Liters Per Day
Kg	Kilo Gram
MT	Metric Ton
CO ₂	Carbon Di Oxide
Qty	Quantity

CHAPTER-I INTRODUCTION

1.1 Objectives:

1. To study present Energy Consumption
2. To Study CO₂ emissions
3. To study usage of Renewable Energy
4. Study of Waste Management
5. Study of Rain Water Management
6. Study of Green & Sustainable Practices

1.2 General Details of College: Table No 1:

No	Head	Particulars
1	Name of Institution	Shree Santkrupa College of Pharmacy, Ghogaon
2	Address	Ghogaon (Shivajinagar) Dist. Satara (M.H.) – 415 111
3	Affiliation	Shivaji University, Kolhapur

CHAPTER-II

STUDY OF PRESENT ENERGY CONSUMPTION

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

Table No 2: Electrical Bill Analysis- 2020-21:

No	Month	Energy Purchased, kWh
1	Apr-20	1239
2	May-20	377
3	Jun-20	424
4	Jul-20	460
5	Aug-20	474
6	Sep-20	576
7	Oct-20	480
8	Nov-20	478
9	Dec-20	457
10	Jan-21	642
11	Feb-21	716
12	Mar-21	809
13	Total	7132
14	Maximum	1239
15	Minimum	377
16	Average	594.33

Chart No 1: Variation in Monthly Energy Consumption:

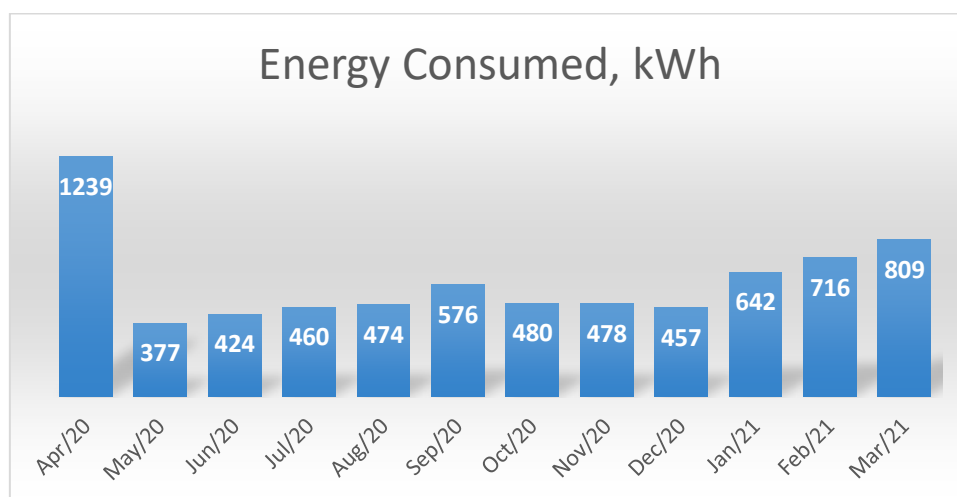


Table No 3: Variation in Important Parameters:

No	Parameter/ Variation	Energy Purchased, kWh
1	Total	7132

2	Maximum	1239
3	Minimum	377
4	Average	594.33

CHAPTER III

STUDY OF CARBON FOOTPRINTING

A **Carbon Foot print** is defined as the Total Greenhouse Gas emissions, emitted due to various activities. In this we compute the emissions of Carbon-Di-Oxide, by usage of the various forms of Energy used by the College for performing its day to day activities

The College uses Electrical Energy for various Electrical gadgets.

Basis for computation of CO₂ Emissions:

The basis of Calculation for CO₂ emissions is as under.

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

Based on the above Data we compute the CO₂ emissions which are being released in to the atmosphere by the College due to its Day to Day operations

Table No4: Month wise CO₂ Emissions:

No	Month	Energy Purchased, kWh	CO ₂ Emissions, MT
1	Apr-20	1239	1.115
2	May-20	377	0.339
3	Jun-20	424	0.381
4	Jul-20	460	0.414
5	Aug-20	474	0.426
6	Sep-20	576	0.518
7	Oct-20	480	0.432
8	Nov-20	478	0.430
9	Dec-20	457	0.411
10	Jan-21	642	0.577
11	Feb-21	716	0.644
12	Mar-21	809	0.728
13	Total	7132	6.418
14	Maximum	1239	1.115
15	Minimum	377	0.339
16	Average	594.333	0.534

Chart No 2: Month wise CO₂Emissions:

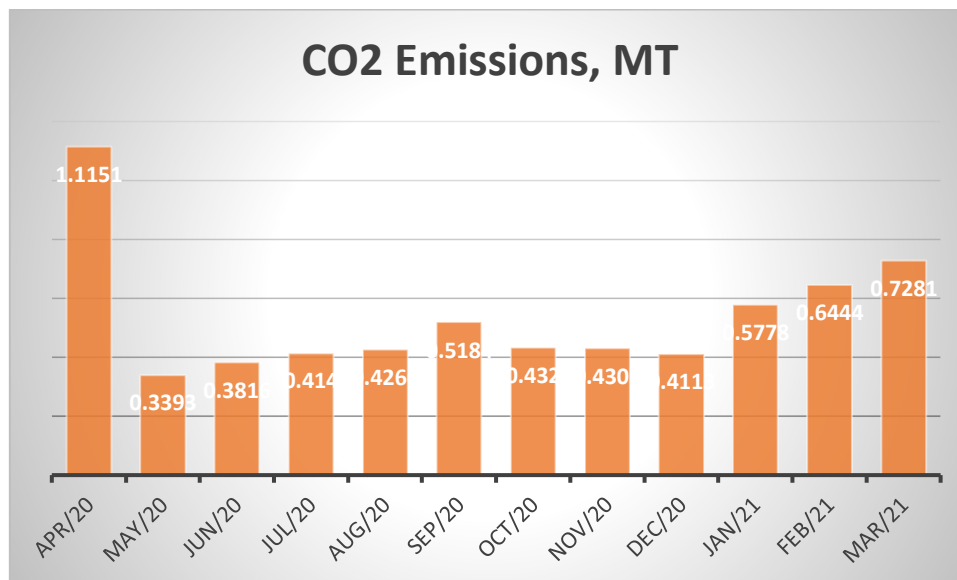


Table No 5: Variation in Important Parameters:

No	Parameter/ Variation	Energy Purchased, kWh	CO2 Emissions, MT
1	Total	7132	6.418
2	Maximum	1239	1.115
3	Minimum	377	0.339
4	Average	594.333	0.534

CHAPTER IV STUDY OF USAGE OF RENEWABLE ENERGY

As on today College has not install solar roof-top PV plant, Solar thermal water heating plant, it is recommend to install solar rooftop plant on the College building.

CHAPTER V STUDY OF WASTE MANAGEMENT

5.1 Segregation of Waste at Source:

The Waste is segregated at source and the recyclable waste, like paper waste is handed over to authorized waste collecting agent for further recycling.



5.2 Organic Waste Management:

The Institute has a Bio Composting Pit, to convert the Leafy Waste into Bio Compost.



5.3 Liquid Waste Management:

The College has installed Septic tank and is cleaned periodically.

5.4 E-Waste Management:

The E-Waste is disposed of through Authorized Agency.

5.5 Sanitary Waste Incinerator:

The College has not install Sanitary Waste Incinerator. It is recommended to install Sanitary Waste Incinerator.

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 Management Pipe:



CHAPTER-VII

STUDY OF GREEN & SUSTAINABLE PRACTICES

7.1 Pedestrian Friendly Roads:

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

Photograph of Internal Road:



7.2 Internal Tree Plantation:

The College has well maintained landscaped garden in the campus.

Photograph of Tree plantation:



7.3 Provision of Ramp:

The College has facility for ramp, for easy movement for Divyaang.



ANNEXURE-1:
DETAILS OF TREES& PLANTS:

Presently the College Campus has well maintained medicinal plantation:

No	Name of Trees
1	Kadamba Tree
2	Gulmohor
3	Mangifera India
4	Coconut
5	Morpankhi
6	Cycus

