

GREEN AUDIT REPORT
of
Shree Santkrupa Shikshan Sanstha's
**SHREE SANTKRUPA COLLEGE OF
PHARMACY,**

Ghogaon (Shivajinagar) Dist. Satara (M.H.) – 415 111



Year: 2022-23

Prepared by:

ENGRESS SERVICES

Yashashree, 26, Nirmal Bag Society
Near Muktangnan English School, Parvati, Pune 411009
Phone: 09890444795 Email: engress123@gmail.com

ENGRESS SERVICES

Yashashree, 26, Nirmal Bag Society, Near Muktangnan English School,
Parvati, Pune 411 009 Tel: 09890444795 Email: engress123@gmail.com
MEDA Registration No: ECN/2022-23/CR-43/1709
ISO: 9001-2015 Certified (Cert No: 23EQKC13),
ISO: 14001-2015 Certified (Cert No: 23EEKW20)

GREEN AUDIT CERTIFICATE

Certificate No: ES/SCP/22-23/02

Date: 07/11/2023

This is to certify that we have conducted Green Audit at Shree Santkrupa College of Pharmacy, Ghogaon, in the Year 2022-23.

The Institute has adopted following Energy Efficient & Green Practices:

- Usage of Energy Efficient LED Light Fitting
- Installation of 25 Kw Capacity Solar Power Plant
- Segregation of Waste at Source
- Installation of Bio Composting Pit
- College has installed septic tanks and it cleans periodically
- Installation of Rain Water Harvesting Project
- Maintenance of good Internal Road
- Tree Plantation in the campus
- Provision of Ramp for Divyangajan
- 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 Engress Services,



A Y Mehendale,

B E- Mech, M Tech-Energy, Certified Energy Auditor, EA-8192
ASSOCHAM GEM Certified Professional: GEM: 22/788

REGISTRATION CERTIFICATES



MEDA Registration Certificate



GEM Certified Professional Certificate



ISO: 9001-2015 Certificate



ISO: 14001-2015 Certificate

INDEX

Sr. No	Particulars	Page No
I	Acknowledgement	5
II	Executive Summary	6
III	Abbreviations	8
1	Introduction	9
2	Study of Energy Consumption & CO ₂ Emission	10
3	Study of Usage of Renewable Energy	12
4	Study of Waste Management	13
5	Study of Rain Water Management	15
6	Study of Green & Sustainable Practices	16
	Annexure	
I	List of Trees & Plants	18

ACKNOWLEDGEMENT

We Engress Services, Pune, express our sincere gratitude to the management of Shree Santkrupa College of Pharmacy, Ghogaon for awarding us the assignment of Green Audit of their Campus for the Year: 2022-23.

We are thankful to all the 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 Emission:

No	Particulars	Value	Unit
1	Annual Energy Consumption	18593	kWh
2	Annual CO ₂ Emissions	17.13	MT

3. Renewable Energy & Energy Efficiency Projects:

- Usage of Energy Efficient LED Fittings
- Maximum usage of Day Lighting
- Installation of 25 Kw Capacity Solar Power Plant

4. 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.

5.2 Bio Composting Pit:

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

5.3 Liquid Waste Management:

The Institute has installed Septic Tank and it cleans periodically.

5.4 Sanitary Waste Management:

The Institute has not installed Sanitary Waste Incinerator, It is recommended to install Sanitary Waste Incinerator for disposal of the Sanitary Waste.

5.5 E-Waste Management:

It is recommended to dispose of the E Waste through Authorized Agency.

6. Rain Water Management:

The Institute has installed the Rainwater Management project; the rain water falling on the terrace is collected through pipes and is used for recharging the land water table.

7. Green & Sustainable Practices:

- Maintenance of good Internal Road
- Provision of Ramp for Divyangajan
- Creation of awareness on Resource Conservation Display of Posters

8. Assumption:

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

9. Reference:

- For CO₂ Emissions: www.tatapower.com

ABBREVIATIONS

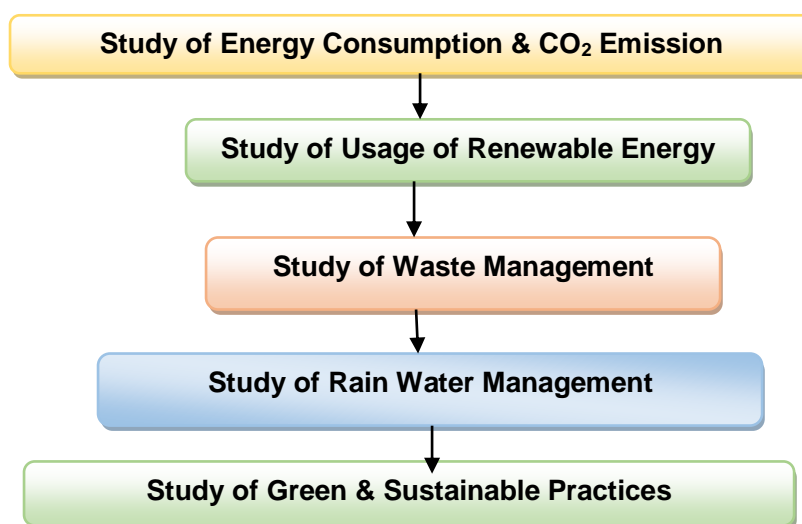
BEE	Bureau of Energy Efficiency
kWh	Kilo Watt Hour
LPD	Liters Per Day
Kg	Kilo Gram
MT	Metric Ton
CO ₂	Carbon Di Oxide
Qty	Quantity

CHAPTER-I INTRODUCTION

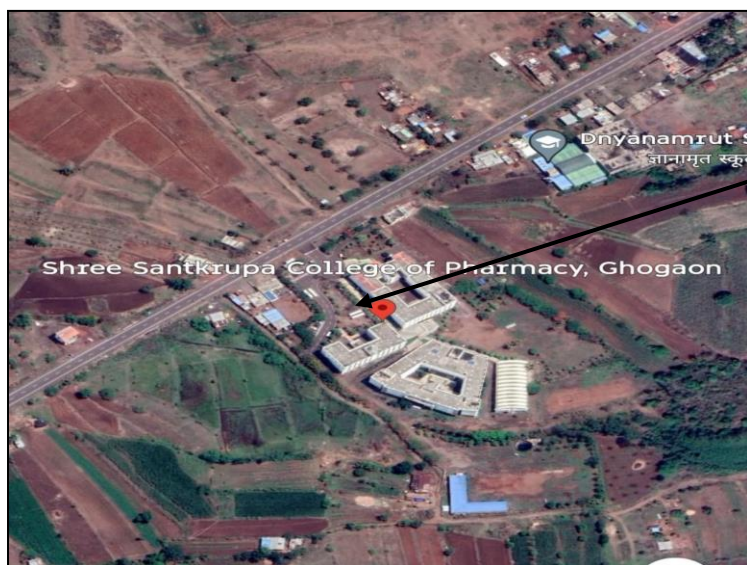
1.1 Introduction:

A Green Audit is conducted at Shree Santkrupa College of Pharmacy, Ghogaon.

1.2 Audit Procedural Steps:



1.3 Institute Location Image:



Institute
Campus

CHAPTER-II

STUDY OF ENERGY CONSUMPTION & CO₂ EMISSION

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 Institute for performing its day to day activities

The Institute uses Electrical Energy for various Electrical gadgets.

Basis for computation of CO₂ Emissions:

The basis of Calculation for CO₂ emissions due to Electrical Energy 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 Institute due to its Day to Day operations

Table No1: Month wise CO₂ Emissions:

No	Month	Energy Consumed, kWh	CO ₂ Emissions, MT
1	Apr-22	1143	1.06
2	May-22	1356	1.25
3	Jun-22	1440	1.33
4	Jul-22	1560	1.44
5	Aug-22	1725	1.58
6	Sep-22	1668	1.54
7	Oct-22	1710	1.58
8	Nov-22	1653	1.52
9	Dec-22	1473	1.36
10	Jan-23	1650	1.52
11	Feb-23	1563	1.44
12	Mar-23	1652	1.52
13	Total	18593	17.13
14	Maximum	1725	1.58
15	Minimum	1143	1.06
16	Average	1549.41	1.43

Chart No 1: Month wise CO₂ Emissions:

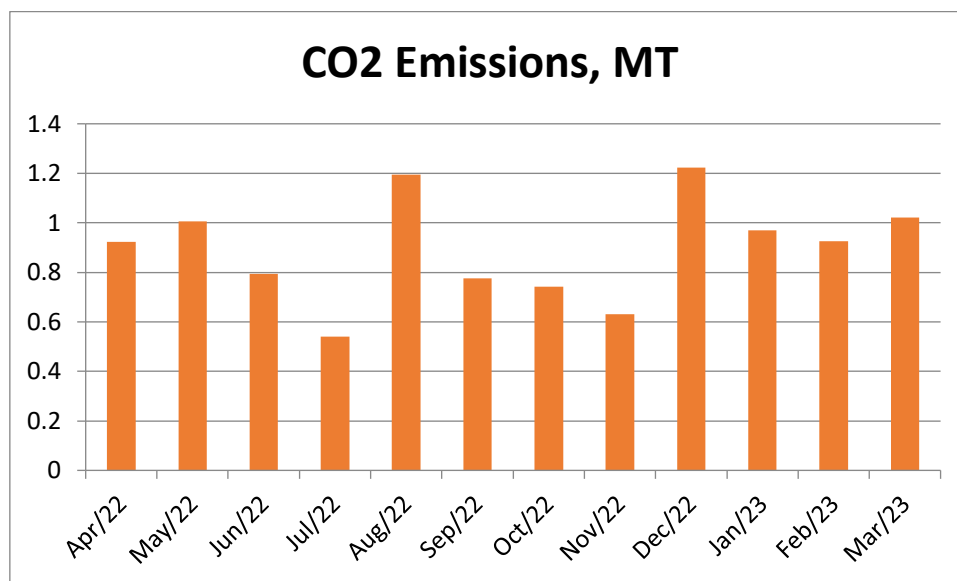


Table No2: Important Parameters:

No	Parameter/ Value	Energy Consumed, kWh	CO ₂ Emissions, MT
1	Total	18593	17.13
2	Maximum	1725	1.58
3	Minimum	1143	1.06
4	Average	1549.41	1.43

CHAPTER III STUDY OF USAGE OF RENEWABLE ENERGY

The Institute has installed a **25 kWp** capacity Roof top Solar PV Plant this year.
Now we compute the Percentage of Alternate Energy to Annual Energy demand:

Table No 7: Computation of % Annual Energy Demand met by Alternate Energy:

No	Particulars	Value	Unit
1	Energy Purchased from MSEDCL	18593	kWh
2	Installed Roof Top Solar PV Plant Capacity	25	kWp
3	Average Daily Energy Generated	4	kWh/kWp
4	Annual Generation Days	300	Nos
5	Annual Solar Energy Generated	30000	kWh
6	Total Energy Demand = (1) + (5)	35887	kWh
7	Expecting % of Usage of Alternate Energy to Total Annual Energy Demand for Current Year Consumption= (5)*100/ (6)	61	%

Photograph of Roof Top Solar PV Plant:



CHAPTER IV STUDY OF WASTE MANAGEMENT

4.1 Segregation of Waste at Source:

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

Photograph of Waste Collection Bins:



4.2 Bio Composting Pit:

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

Photograph of Bio Composting Pit:



4.3 Liquid Waste Management:

The Institute has installed Septic Tanks it cleans periodically.

4.4 Sanitary Waste Management:

The Institute has not install Sanitary Waste Incinerator, It is recommended to install Sanitary Waste Incinerator for disposal of the Sanitary Waste.

4.5 E Waste Management:

It is recommended to dispose of the E Waste through Authorized Agency.

CHAPTER V

STUDY OF RAIN WATER MANAGEMENT

The Institute has implemented the Rain Water Management Project. The Institute has installed Pipes from the terrace and the Rain water falling on the terrace is gathered and is used for recharging the land water table and gardening purpose.

Photograph of Rain Water Management & Pipe Section:



CHAPTER VI STUDY OF GREEN & SUSTAINABLE PRACTICES

6.1 Internal Pedestrian:

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

Photograph of Internal Pedestrian:



6.2 Internal Tree Plantation:

The College has well maintained landscaped garden in the campus.

Photograph of Tree plantation:



6.3 Provision of Ramp for Divyangajan:

For easy movement of Divyangajan, the Institute has made provision of Ramp.

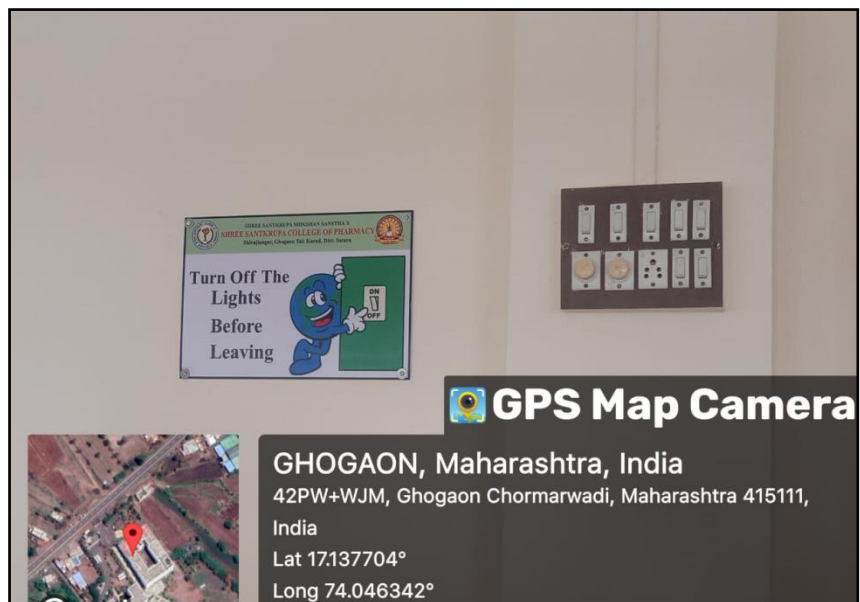
Photograph of Ramp:



6.3 Creation of Awareness about Energy Conservation:

The Institute has displayed posters emphasizing on importance of Energy Conservation.

Photograph of Poster on Energy Conservation:



ANNEXURE-I

LIST OF TREES & PLANTS IN THE CAMPUS

Presently the College Campus has more than 100 trees:

No	Name of Trees
1	Azadirachta Indica (Neem)
2	Cestrum nocturnum (Ratrani)
3	Tectona Grandis (Sagwan)
4	Thuja (Vidya)
5	Delonix Regia (Gulmohar)
6	Millettia pinnata (Karanj)
7	Lawsonia inermis (Mehendi)
8	Saraca asoca (Ashoka)
9	Alstonia scholaris (Saptparni)
10	Palm Tree

