

GREEN AUDIT REPORT

SAMARTH RURAL EDUCATION INSTITUTE'S, SAMARTH COLLEGE OF COMPUTER SCIENCE,

A/P Belhe, Tal: Junnar, Dist: Pune 412 410



Year: 2023-24

Prepared by:

ENGRESS SERVICES

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ASSOCIATION OF CHAMBERS OF COMMERCE AND INDUSTRY OF INDIA

GSMP Certificate

ASSOCIATION hereby certifies that

Mr. A.Y Mehendale

has successfully passed the

Green and Sustainable Movement Certified Professional Team (GSMP-CP)

with

"Excellent Performance"

on

08 June 2010

He is a new delegate to attend the 10th Sustainability Conference, Pune, ASSOCHAM and is now a member of the GSMP-Certified Professional club in India.

(Signature)
Pratik B. Shinde
President, ASSOCHAM

08/06/2010



MAHARASHTRA ENERGY DEVELOPMENT AGENCY
Maharashtra Energy Development Agency
 Government of Maharashtra Government
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 E-mail: Pwae@pwae.org
 Tel: No. 020-25504000
 Website: www.maharashtra.gov

AG/2012/13743/1706

14th May, 2012

**CERTIFICATE OF REGISTRATION
FOR CLASS "A"**

We hereby certify that the firm having following particulars is registered with MAHARASHTRA ENERGY DEVELOPMENT AGENCY (MADA) under given category in "Energy Monitor & Energy Auditor" in Maharashtra for Energy Conservation Programme of MADA.

Name and Address of the Firm	M/S Engineer Services Tushkar, 25, Nandgaon Road, Near Maharashtra English School, Pune-411 006
Registration Category	Registered Engineer for Energy Conservation Programme for Class - I
Registration Number	MAED/EN/2012/13743-01/CL-I

➤ Energy Conservation Programme intends to identify areas where wasteful use of energy occurs and to estimate the actual EN Energy Conservation and take various steps to achieve the estimated energy savings.

➤ MADA reserves the right to visit at any time without giving prior information to verify whether activities performed by the firm and meeting the regulations. If the information is found incorrect.

➤ This registration is valid till **30th May, 2014** from the date of registration, to carry out energy audits under the Energy Conservation Programme.

➤ The Director General, MADA reserves the right to cancel the registration at any time without assigning any reasons thereof.


 General Manager (EC)

Certificate of Registration

This is to Certify that
Environmental Management System of

ENGINESS SERVICES

Is Compliant with **ISO 14001:2015** Standard
 KARAIKAL, INDIA

has been assessed and found to conform to the requirements of
ISO 14001:2015
for the following scope:

ENVIRONMENTAL MANAGEMENT SYSTEMS FOR THE PRODUCTION OF
 POLYESTER, POLYESTER CLOTHING, POLYESTER CLOTH, POLYESTER CLOTH, POLYESTER

Registration No.	00000000	Assessment Date	2016/05/05
Initial Registration Date	2016/05/05	Next Audit Date	2017/05/05
Date of Expiry	2018/05/05		
Issued By	00000000	Next Audit Date	2017/05/05





 Director

Megatrend Management Services Pvt. Ltd.
 9/1, Lakshmi Nagar, Karaiikal, Tamil Nadu, India. V. 6.0000
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ACKNOWLEDGEMENT

We at Engress Services, Pune, express our sincere gratitude to the management of Samarth Rural Education Institute's Samarth College of Computer Science, A/P Belhe, Tal: Junnar, Dist: Pune, for awarding us the assignment of Green Audit of their Campus for the Year: 2023-24.

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

EXECUTIVE SUMMARY

1. Samarth College of Computer Science, A/P Belhe, Tal; Junnar, Dist: Pune 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 Consumed	28530	kWh
2	Annual CO ₂ Emissions	26.53	MT

3. Usage of Renewable Energy:

- Installation of 2000 LPD Solar Water Heating System

4. Waste Management:

No	Head	Particulars
1	Solid Waste	Segregation of Waste at source
2	Food Waste	Provision of Bio Gas Plant
3	E Waste	Recommended to dispose of through Authorized Agency

5. Rain Water Management:

The rain water falling on the terrace is collected and is used to crease the Underground Water Table.

6. Green & Sustainable Practices:

- Maintenance of good Internal Road
- Tree Plantation in the campus.
- Provision of Ramp for Divyangajan
- Creation of awareness on Energy Conservation Display of Posters

7. Assumptions:

1. **1 kWh** of Electrical Energy releases **0.93 Kg of CO₂** into atmosphere
2. Energy Consumption is computed based on Load Utilization Factor

8. Reference:

- For CO₂ Emissions: www.ccd.gujarat.gov.in

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 Samarth Rural Education Institute's Samarth College of Computer Science, A/P Belhe, Tal: Junnar, Dist: Pune.

1.2 Key Study Points:

No	Particulars
1	Study of Present Energy Consumption & CO ₂ Emission
2	Study of Usage of Renewable Energy
3	Study of Waste Management Practices
4	Study of Rain Water Management
5	Study of Green & Sustainable Initiatives

1.3 College Location Image:



College
Campus

CHAPTER-II

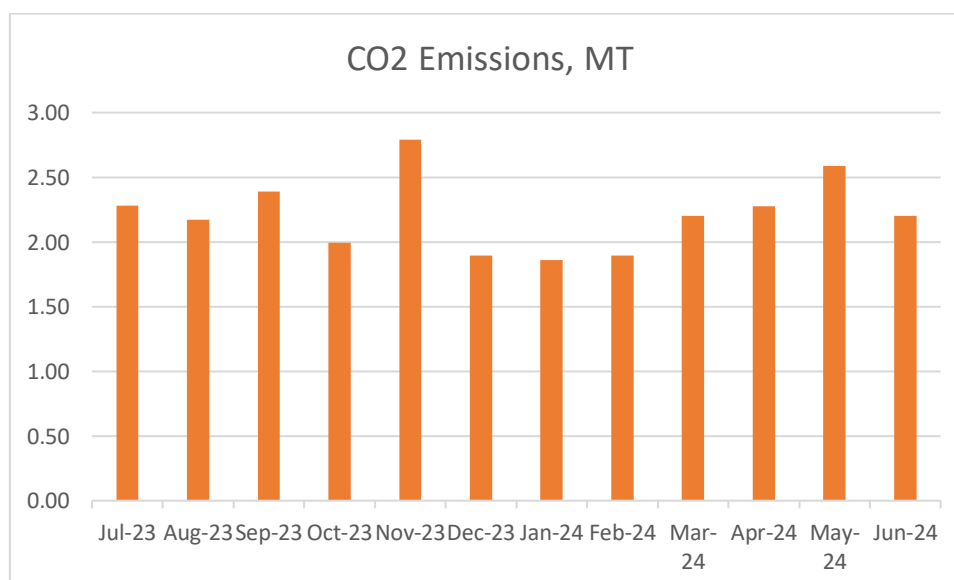
STUDY OF ENERGY CONSUMPTION & CO₂ EMISSION

A **Carbon Foot print** is defined as the Total Greenhouse Gas emissions, emitted due to various activities. **Basis for computation of CO₂ Emissions:** 1 kWh of Electrical Energy releases **0.93 Kg of CO₂** into atmosphere

Table No 1: Month wise CO₂ Emissions:

No	Month	Energy Consumed, kWh	CO ₂ Emissions, MT
1	Jul-23	2450	2.28
2	Aug-23	2336	2.17
3	Sep-23	2569	2.39
4	Oct-23	2145	1.99
5	Nov-23	2998	2.79
6	Dec-23	2036	1.89
7	Jan-24	1998	1.86
8	Feb-24	2036	1.89
9	Mar-24	2369	2.20
10	Apr-24	2445	2.27
11	May-24	2780	2.59
12	Jun-24	2368	2.20
13	Total	28530	26.53
14	Maximum	2998	2.79
15	Minimum	1998	1.86
16	Average	2377.5	2.21

Chart No 1: Month wise CO₂ Emissions:



CHAPTER III

STUDY OF USAGE OF RENEWABLE ENERGY

The College has installed Solar Thermal Water Heating System.

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

Photograph of Solar Thermal Water Heating System:



CHAPTER IV STUDY OF WASTE MANAGEMENT

In this Chapter, we present the Waste Management Practices, followed by the College.

Details of Waste Management Practices:

No	Head	Observation	Photograph
1	Solid Waste	Segregation of Waste at Source: Provision of Waste Collection Bins	<p>Waste Collection Bin</p> 
2	Food Waste	The Food Waste is converted in to Bio gas in a Bio Gas Plant.	<p>Bio Gas Plant:</p> 
3	E Waste	Recommended to dispose of through Authorized Agency.	

CHAPTER-V

STUDY OF RAIN WATER MANAGEMENT

The College has installed the Rainwater Management project, the rain water falling on the terrace is used to increase the Underground Water Table.

Photograph of Rain water Collecting Pipe:





Rain Water
Collecting pipe



CHAPTER-VI

STUDY OF GREEN & SUSTAINABLE PRACTICES

In this Chapter, we present the Green & Sustainable Practices followed by the College.

Green & Sustainable Practices:

No	Head	Observation	Photograph
1	Easy Movement of Stake Holders	Provision of Good Internal Road within the Campus	<p>Internal Road:</p> 
2	Tree Plantation	Internal Tree Plantation in the Campus	<p>Internal Tree Plantation:</p> 

3	Facilities for Divyangajan	Provision of Ramp Structure for Divyangajan	<p>Ramp for Divyangajan:</p> 
4	Creation of Awareness among Stake Holders	Display of Poster on Energy Conservation	<p>Poster on Energy Conservation:</p> 

ANNEXURE-1:
LIST OF TREES AND PLANTS:

No	Common Name	Number
1	Poptree	75
2	Jackfruit	1
3	Guava	2
4	Almond	18
5	Umbar	2
6	Ashoka	11
7	Shevari	11
8	Mango	2
9	Kadunimb	8
10	Coconut	8
11	Vad	3
12	Peepal	3
13	Krishnazad	3
14	Chikoo	1
15	Khair	1
16	Shenga	6
17	Kaghalshevari	1
18	Nirgundi	4
19	Sitafal	1
20	Papaya	1
21	Total	162