

GREEN AUDIT REPORT
of
ASM's INSTITUTE OF PROFESSIONAL STUDIES,
Pimpri, Pune 411 018



Year: 2020-21

Prepared by

ENRICH CONSULTANTS

Yashashree, 26, Nirmal Bag Society
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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,
Aundh, Pune, Maharashtra 411067

Ph No: 020-35000450

Email: eee@mahaurja.com, Web: www.mahaurja.com

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 Mukhtangan 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)



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Tel: 020-24220747 Email: enrichcons@gmail.com

Ref: EC/ASMCSIT/20-21/02

Date: 19/7/2021

CERTIFICATE

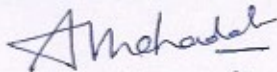
This is to certify that we have conducted Green Audit at ASM's, Institute of Professional Studies, Pimpri, Pune 411 018 in the year 2020-21.

The Institute has adopted Green Practices:

- Usage of Energy Efficient LED Fittings
- Segregation of Waste at source
- Installation of Sanitary Waste Incinerator, for disposal of Sanitary Waste
- Installation of Rain Water Management Project
- Maintenance of Good Internal Roads
- Tree Plantation in the campus
- Provision of Ramp for Divyangajan

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



INDEX

Sr. No	Particulars	Page No
I	Acknowledgement	5
II	Executive Summary	6
III	Abbreviations	8
1	Introduction	9
2	Study of Present Energy Consumption	10
3	Carbon Foot printing	12
4	Study of Usage of Renewable Energy	14
5	Study of Waste Management	15
6	Study of Rain Water Management	16
7	Study of Green & Sustainable Practices	17



ACKNOWLEDGEMENT

We at Enrich Consultants, Pune, express our sincere gratitude to the management of ASM's Institute of Professional Studies, Pimpri, Pune 411 018, for awarding us the assignment of Green Audit of their Pimpri campus for the Year: 20-21

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



EXECUTIVE SUMMARY

1. **ASM's Institute of Professional Studies, Pimpri, 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	35994	32.39
2	Maximum	4534	4.08
3	Minimum	1676	1.51
4	Average	3000	2.70

3. Various Majors Adopted for Energy Conservation:

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

4. Usage of Renewable Energy Source:

- The Institute has yet to install Roof Top Solar PV Plant.

5. Waste Management:

5.1 Segregation of Waste at Source:

The Waste is segregated at source and the recyclable waste like Paper waste, Plastic Waste is handed over to authorized agency.

5.2 Sanitary Waste Management:

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

5.3 E-Waste Management:

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

6. Rain Water Management:

The Institute 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

ASM	:	Ayudyogik Shikshan Mandal
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 Institute:

No	Head	Particulars
1	Name	ASM's Institute of Professional Studies
2	Address	Pimpri, Pune 411 018
3	Year of Establishment	2008
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	Apr-20	1686
2	May-20	1676
3	Jun-20	1854
4	Jul-20	2026
5	Aug-20	2023
6	Sep-20	3257
7	Oct-20	3500
8	Nov-20	3269
9	Dec-20	4260
10	Jan-21	4534
11	Feb-21	3531
12	Mar-21	4377
13	Total	35994
14	Maximum	4534
15	Minimum	1676
16	Average	3000

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

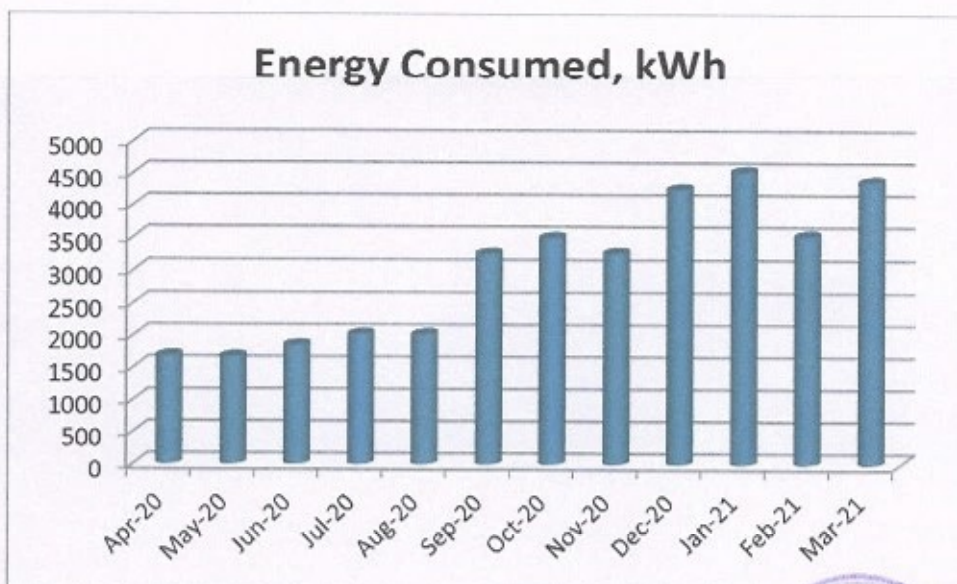


Table No 3: Important parameters:

No	Parameter	Energy consumed, kWh
1	Total	35994
2	Maximum	4534
3	Minimum	1676
4	Average	3000



CHAPTER-III CARBON FOOT PRINTING

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 are: 1 Unit (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 No 4: Month wise CO₂ Emissions:

No	Month	Energy Consumed, kWh	CO ₂ Emissions, MT
1	Apr-20	1686	1.52
2	May-20	1676	1.51
3	Jun-20	1854	1.67
4	Jul-20	2026	1.82
5	Aug-20	2023	1.82
6	Sep-20	3257	2.93
7	Oct-20	3500	3.15
8	Nov-20	3269	2.94
9	Dec-20	4260	3.83
10	Jan-21	4534	4.08
11	Feb-21	3531	3.18
12	Mar-21	4377	3.94
13	Total	35994	32.39
14	Maximum	4534	4.08
15	Minimum	1676	1.51
16	Average	3000	2.70

Chart No 2: Representation of Month wise CO₂ emissions:

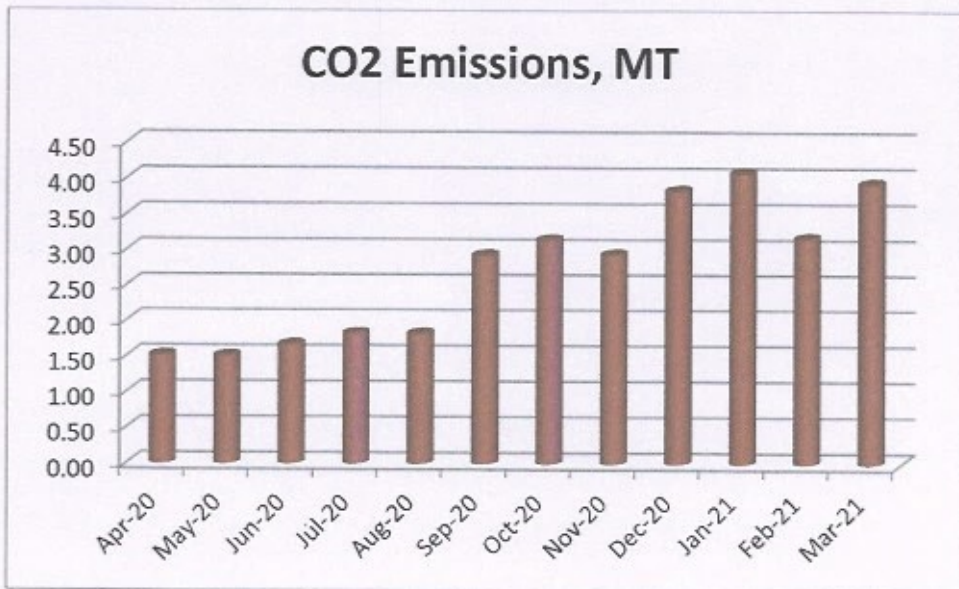


Table No 5: Key observations:

No	Parameter	Energy Consumed, kWh	CO ₂ emissions, MT
1	Total	35994	32.39
2	Maximum	4534	4.08
3	Minimum	1676	1.51
4	Average	3000	2.70



CHAPTER-IV

STUDY OF USAGE OF RENEWABLE ENERGY

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



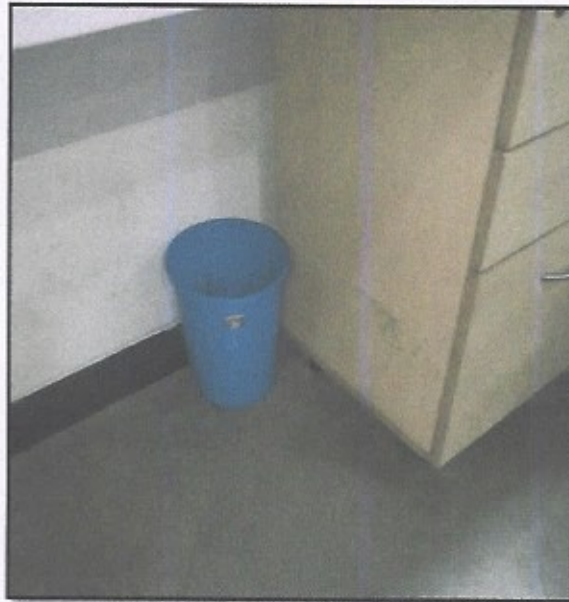
CHAPTER-V

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 Institute has a Sanitary Waste Incinerator, to dispose of the Sanitary Waste.

Photograph of Sanitary Waste Incinerator:



5.3 E-Waste Management:

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

CHAPTER-VI

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 to increase the underground water table.

Photograph of Rain Water Carrying Pipe:



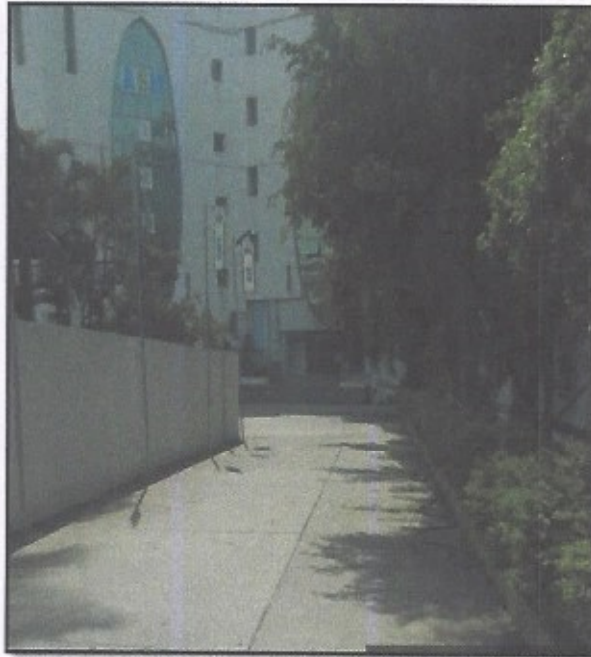
CHAPTER-VII

STUDY OF GREEN & SUSTAINABLE PRACTICES

7.1 Pedestrian Friendly Roads:

The Institute 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 Institute has well maintained Tree Plantation.

Photograph of Tree Plantation:



7.3 Provision of Ramp for Divyangajan:

The Institute has made provision of Ramp for the Divyangajan.

Photograph of Ramp for Divyangajan:

