

GREEN AUDIT REPORT

of

ASM's College of Commerce, Science & Information Technology,

Pimpri, Pune 411 018

Year: 2018-19

Prepared by

ENRICH CONSULTANTS

Yashashree, 26, Nirmal Bag Society

Near Mukhtangan English School, Parvati, Pune 411009

Phone: 09890444795 Email: enrichcons@gmail.com



MAHARASHTRA ENERGY DEVELOPMENT AGENCY



Maharashtra Energy Development Agency

(A Government of Maharashtra undertaking)

2nd 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

19th 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 Muktangan 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)



ENRICH CONSULTANTS

Yashashree, 26, Nirmal Bag Society,
Near Mukhtangan English School, Parvati, Pune 411 009
Tel: 020-24220747 Email: enrichcons@gmail.com

Ref: EC/ASMCSIT/18-19/02

Date: 2/7/2019

CERTIFICATE

This is to certify that we have conducted Green Audit at ASM's College of Commerce, Science & Information Technology, Pimpri, Pune 411 018 in the year 2018-19.

The College has adopted Green Practices:

- Usage of Energy Efficient LED Fittings
- Segregation of Waste at source
- Installation of Rain Water Management Project
- Maintenance of Good Internal Roads
- Tree Plantation in the campus

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

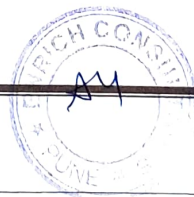
Sr. No	Particulars	Page No
I	Acknowledgement	5
II	Executive Summary	6
III	Abbreviations	7
1	Introduction	8
2	Study of Present Energy Consumption	9
3	Carbon Foot printing	11
4	Study of Usage of Renewable Energy	13
5	Study of Waste Management	14
6	Study of Rain Water Harvesting	15
7	Study of Green Practices	16



ACKNOWLEDGEMENT

We at Enrich Consultants, Pune, express our sincere gratitude to the management of ASM's College of Commerce, Science & Information Technology, Pimpri, Pune 411 018, for awarding us the assignment of Green Audit of their Pimpri campus for the Year: 18-19

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



EXECUTIVE SUMMARY

1. ASM's College of Commerce, Science & Information Technology, 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	40008	32.01
2	Maximum	3968	3.17
3	Minimum	2604	2.08
4	Average	3334	2.67

3. Usage of Renewable Energy Source:

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

4. Waste Management:

4.1 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.

4.2 E-Waste Management:

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

5. 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.

6. Green Practices:

- Good Internal Roads
- Internal Tree Plantation

7. Assumption:

- 1 kWh (Unit) of Electrical Energy releases **0.8 Kg of CO₂** into atmosphere

ABBREVIATIONS

ASM	:	Ayudyogik Shikshan Mandal
LED	:	Light Emitting Diode
kWh	:	kilo-Watt Hour
MT	:	Metric Ton
CO ₂	:	Carbon Di Oxide
MEDA	:	Maharashtra Energy Development Agency



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 Practices

1.2 Table No-1: General Details of College:

No	Head	Particulars
1	Name	ASM's College of Commerce, Science & Information Technology
2	Address	Pimpri, Pune 411 018
3	Year of Establishment	2001
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- 18-19:

No	Month	Energy Consumed, kWh
1	Apr-18	3742
2	May-18	3433
3	Jun-18	3277
4	Jul-18	3919
5	Aug-18	3877
6	Sep-18	3238
7	Oct-18	3968
8	Nov-18	2604
9	Dec-18	2880
10	Jan-19	2859
11	Feb-19	2852
12	Mar-19	3360
13	Total	40008
14	Maximum	3968
15	Minimum	2604
16	Average	3334

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

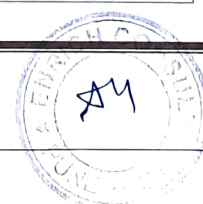
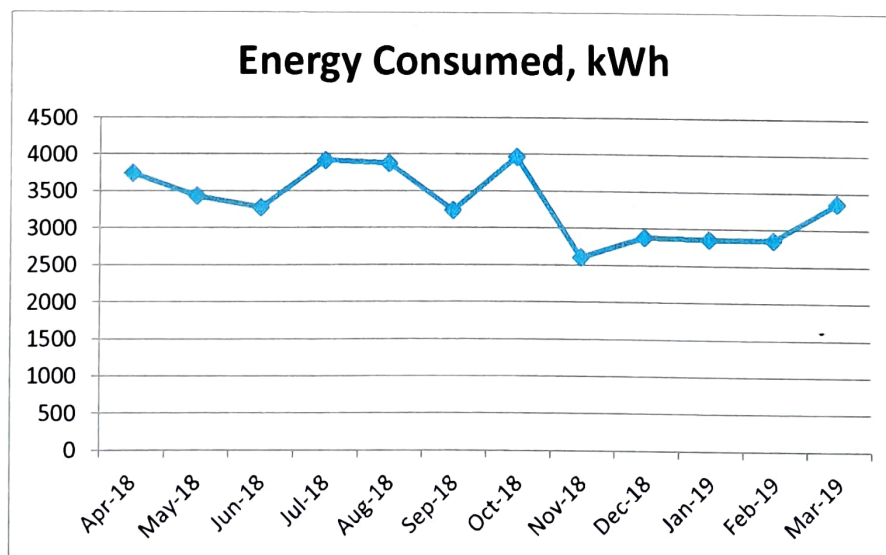


Table No 3: Important parameters:

No	Parameter	Energy consumed, kWh
1	Total	40008
2	Maximum	3968
3	Minimum	2604
4	Average	3334



CHAPTER-III

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 due to Electrical Energy are: 1 Unit (kWh) of Electrical Energy releases 0.8 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 No 4: Month wise CO₂ Emissions:

No	Month	Energy Consumed, kWh	CO ₂ Emissions, MT
1	Apr-18	3742	2.99
2	May-18	3433	2.75
3	Jun-18	3277	2.62
4	Jul-18	3919	3.13
5	Aug-18	3877	3.10
6	Sep-18	3238	2.59
7	Oct-18	3968	3.17
8	Nov-18	2604	2.08
9	Dec-18	2880	2.30
10	Jan-19	2859	2.29
11	Feb-19	2852	2.28
12	Mar-19	3360	2.69
13	Total	40008	32.01
14	Maximum	3968	3.17
15	Minimum	2604	2.08
16	Average	3334	2.67



Chart No 2: Representation of Month wise CO₂ emissions:

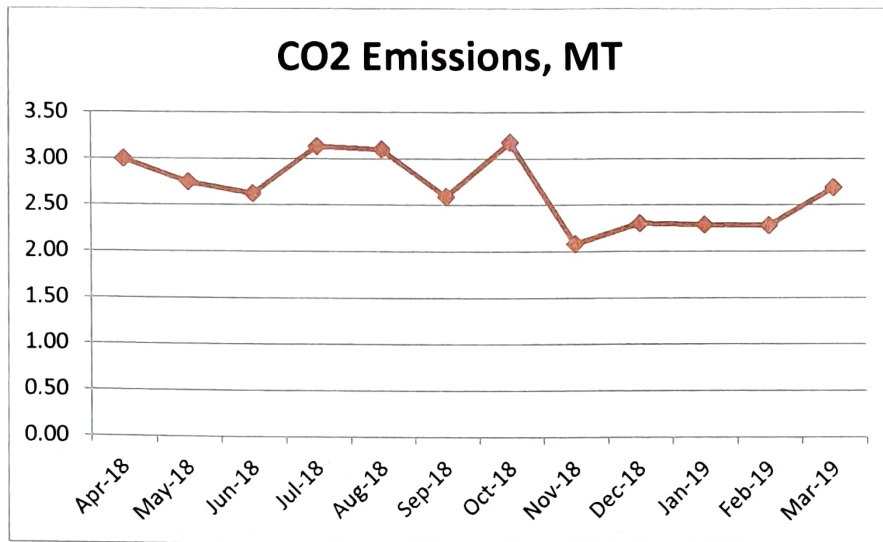


Table No 5: Key observations:

No	Parameter	Energy consumed, kWh	CO ₂ Emissions, MT
1	Total	40008	32.01
2	Maximum	3968	3.17
3	Minimum	2604	2.08
4	Average	3334	2.67



CHAPTER-IV

STUDY OF USAGE OF RENEWABLE ENERGY

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



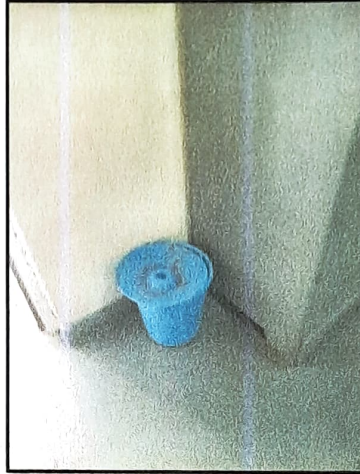
CHAPTER-V

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 E-Waste Management:

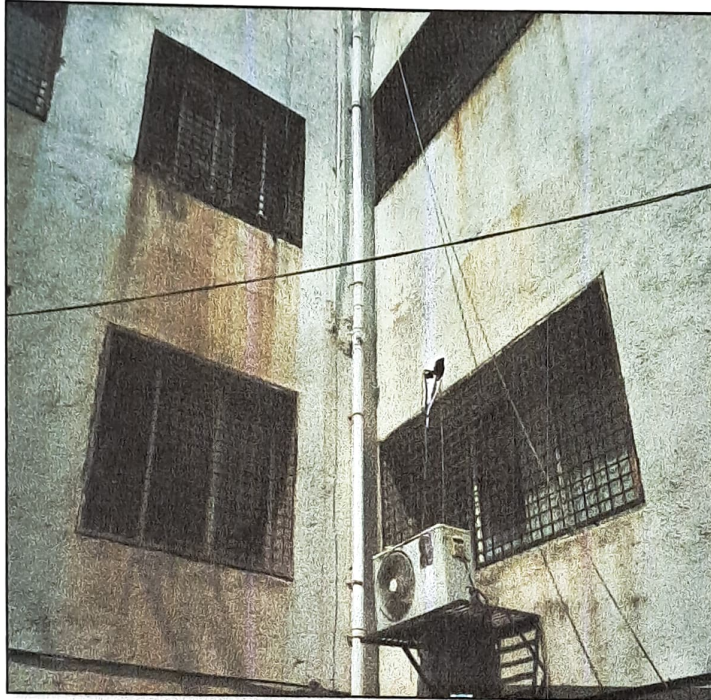
It is recommended to dispose of the E-Waste through Authorized Agency.

CHAPTER-VI

STUDY OF RAIN WATER MANAGEMENT

The College has implemented the Rain Water Harvesting 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 Roads:

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:

