

# GREEN AUDIT REPORT

of

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

Pimpri, Pune 411 018



Year: 2019-20

Prepared by

## ENRICH CONSULTANTS

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**MAHARASHTRA ENERGY DEVELOPMENT AGENCY**



**Maharashtra Energy Development Agency**

(A Government of Maharashtra undertaking)

2<sup>nd</sup> Floor, MHADA Commercial Complex, Opp. Tridal Nagar, Yerwada, Pune 411 006,

Ph No: 020-26614393/266144403

Email: [ccc@mahaurja.com](mailto:ccc@mahaurja.com), Web: [www.mahaurja.com](http://www.mahaurja.com)

ECN/2018-19/CR-05/4174

19<sup>th</sup> September, 2018

**CERTIFICATE OF REGISTRATION  
FOR CLASS 'A'**

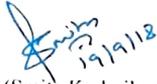
We hereby certify that, the firm having following particulars is registered with **MAHARASHTRA ENERGY DEVELOPMENT AGENCY (MEDA)** under given category as "Energy Planner & Energy Auditor" in Maharashtra for Energy Conservation Programme of MEDA.

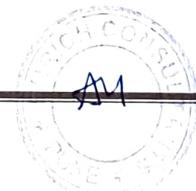
**Name and Address of the firm** : **Enrich Consultants**  
Yashashree, Plot No. 26, Nirmal Bag Society,  
Near Muktangan English School,  
Parvati, Pune - 411009.

**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 **31<sup>st</sup> 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 Muktangam English School, Parvati, Pune 411 009  
Tel: 020-24220747 Email: [enrichcons@gmail.com](mailto:enrichcons@gmail.com)

Ref: EC/ASMCSIT/19-20/02

Date: 22/7/2020

## 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 2019-20.

The College 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,

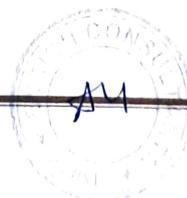


**A Y Mehendale,**  
Certified Energy Auditor, EA-8192



## 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 Harvesting         | 16      |
| 7      | Study of Green & Sustainable Practices | 17      |



## **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: 19-20

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 CO<sub>2</sub> Emission:

| No | Parameter | Energy Consumed, kWh | CO <sub>2</sub> emissions, MT |
|----|-----------|----------------------|-------------------------------|
| 1  | Total     | 39432                | 35.49                         |
| 2  | Maximum   | 3756                 | 3.38                          |
| 3  | Minimum   | 2944                 | 2.65                          |
| 4  | Average   | 3286                 | 2.96                          |

### 3. Various Majors Adopted for Energy Conservation:

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

### 4. Usage of Renewable Energy:

- The College 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 College 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 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.

### 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 CO<sub>2</sub>** into atmosphere

**9. Reference:**

- For CO<sub>2</sub> calculations: [www.tatapower.com](http://www.tatapower.com)



## **ABBREVIATIONS**

|                 |   |                           |
|-----------------|---|---------------------------|
| ASM             | : | Ayudyogik Shikshan Mandal |
| LED             | : | Light Emitting Diode      |
| kWh             | : | kilo-Watt Hour            |
| MT              | : | Metric Ton                |
| CO <sub>2</sub> | : | Carbon Di Oxide           |



## **CHAPTER-I**

### **INTRODUCTION**

#### **1.1 Objectives:**

1. To study present Energy Consumption
2. To Study the present CO<sub>2</sub> 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 College:**

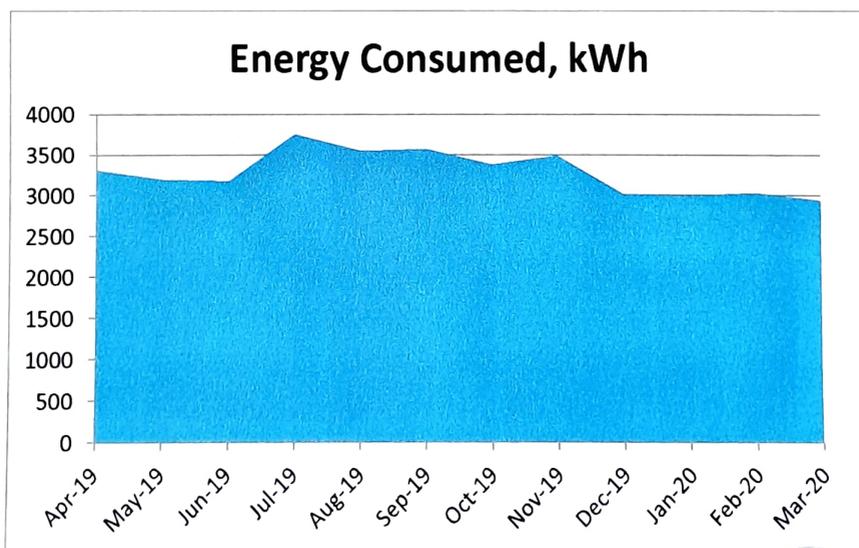
| <b>No</b> | <b>Head</b>           | <b>Particulars</b>  |
|-----------|-----------------------|---|
| 1         | Name                  | ASM's College of Commerce, Science & Information Technology |
| 2         | Address               | Pimpri, Pune 411 018  |
| 3         | Year of Establishment | 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- 19-20:

| No | Month   | Energy Consumed, kWh |
|----|---------|----------------------|
| 1  | Apr-19  | 3314                 |
| 2  | May-19  | 3195                 |
| 3  | Jun-19  | 3179                 |
| 4  | Jul-19  | 3756                 |
| 5  | Aug-19  | 3548                 |
| 6  | Sep-19  | 3571                 |
| 7  | Oct-19  | 3380                 |
| 8  | Nov-19  | 3492                 |
| 9  | Dec-19  | 3018                 |
| 10 | Jan-20  | 3002                 |
| 11 | Feb-20  | 3033                 |
| 12 | Mar-20  | 2944                 |
| 13 | Total   | 39432                |
| 14 | Maximum | 3756                 |
| 15 | Minimum | 2944                 |
| 16 | Average | 3286                 |

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

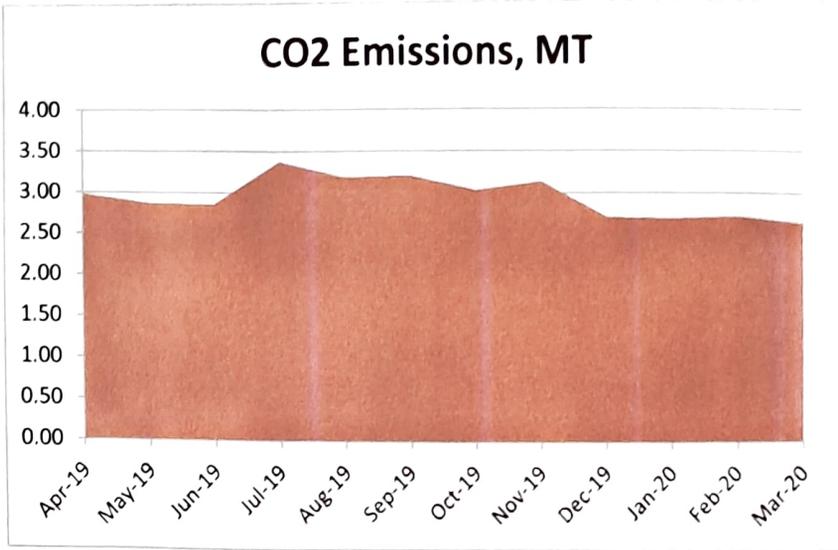


**Table No 3: Important parameters:**

| No | Parameter | Energy Consumed, kWh |
|----|-----------|----------------------|
| 1  | Total     | 39432                |
| 2  | Maximum   | 3756                 |
| 3  | Minimum   | 2944                 |
| 4  | Average   | 3286                 |



**Chart No 2: Representation of Month wise CO<sub>2</sub> emissions:**



**Table No 5: Key observations:**

| No | Parameter | Energy consumed, kWh | CO <sub>2</sub> Emissions, MT |
|----|-----------|----------------------|-------------------------------|
| 1  | Total     | 39432                | 35.49                         |
| 2  | Maximum   | 3756                 | 3.38                          |
| 3  | Minimum   | 2944                 | 2.65                          |
| 4  | Average   | 3286                 | 2.96                          |



## **CHAPTER-IV**

### **STUDY OF USAGE OF RENEWABLE ENERGY**

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



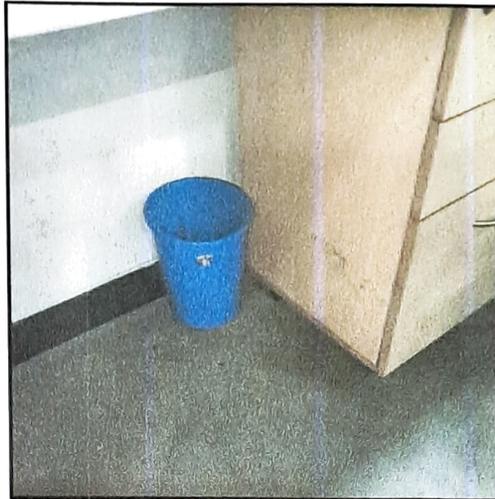
## **CHAPTER-V**

### **STUDY OF WASTE MANAGEMENT**

#### **5.1 Segregation of Waste at Source:**

The Waste is segregated at source. Waste bins are located at various locations

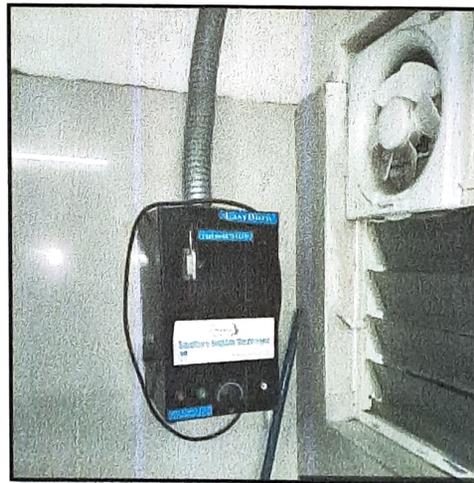
**Photograph of Separate Waste Collection Bin:**



#### **5.2 Sanitary Waste Management:**

The College 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 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 & SUSTAINABLE 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:**



**7.3 Provision of Ramp for Divyangajan:**

The College has made provision of Ramp for the Divyangajan.

**Photograph of Ramp for Divyangajan:**

