GREEN AUDIT REPORT

of

ASM's INSTITUTE OF PROFESSIONAL STUDIES,

Pimpri, Pune 411 018

Year: 2018-19

Prepared by

ENRICH CONSULTANTS

Yashashree, 26, Nirmal Bag Society
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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.

19/9/18
(Smita Kudarikar)
General Manager (EC)

ENRICH CONSULTANTS * PUNE *

ENRICH CONSULTANTS

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

Ref: EC/ASMCSIT/18-19/02 Date: 6/5/2019

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 2018-19.

The Institute 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

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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: 18-19.

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 CO_2 Emission:

No	Parameter	Energy Consumed, kWh	CO_2 emissions, MT
1	Total	49152	39.32
2	Maximum	4874	3.90
3	Minimum	3199	2.56
4	Average	4096	3.28

3. Usage of Renewable Energy Source:

- The Institute 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.

5. 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.

6. Green Practices:

- Good Internal Roads
- Internal Tree Plantation

7. Assumption:

- 1 kWh (Unit) of Electrical Energy releases **0.8 Kg of CO_2** into atmosphere

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 CO_2 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 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- 18-19:

No	Month	Energy Consumed, kWh
1	Apr-18	4598
2	May-18	4217
3	Jun-18	4027
4	Jul-18	4814
5	Aug-18	4763
6	Sep-18	3978
7	Oct-18	4874
8	Nov-18	3199
9	Dec-18	3538
10	Jan-19	3512
11	Feb-19	3504
12	Mar-19	4128
13	Total	49152
14	Maximum	4874
15	Minimum	3199
16	Average	4096

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

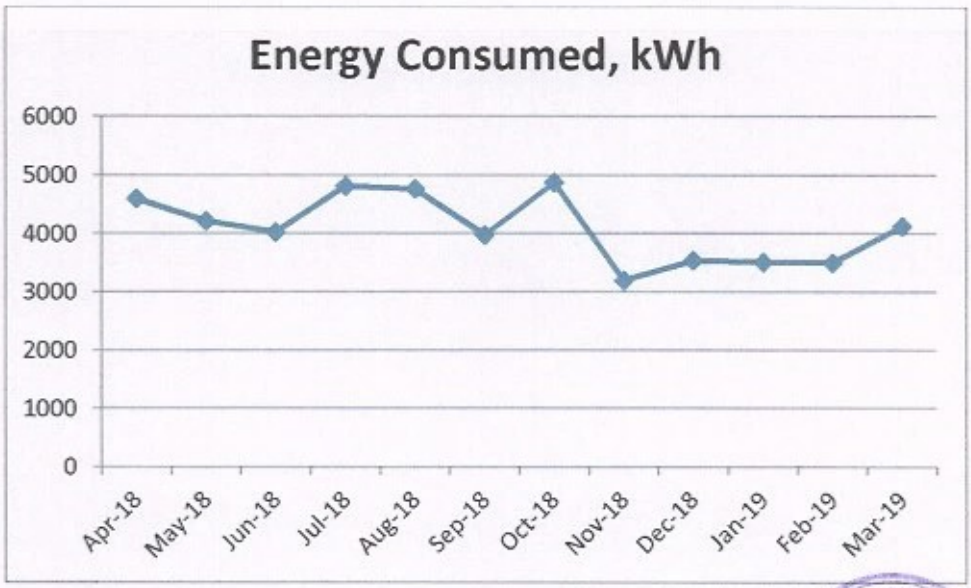

Table No 3: Important parameters:

No	Parameter	Energy consumed, kWh
1	Total	49152
2	Maximum	4874
3	Minimum	3199
4	Average	4096

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 CO_2 Emissions:

The basis of Calculation for CO_2 emissions due to Electrical Energy are: 1 Unit (kWh) of Electrical Energy releases **0.8 Kg of CO_2** into atmosphere.

Based on the above Data we compute the CO_2 emissions which are being released in to the atmosphere by the Institute due to its Day to Day operations

Table No 4: Month wise CO_2 Emissions:

No	Month	Energy Consumed, kWh	CO_2 Emissions, MT
1	Apr-18	4598	3.68
2	May-18	4217	3.37
3	Jun-18	4027	3.22
4	Jul-18	4814	3.85
5	Aug-18	4763	3.81
6	Sep-18	3978	3.18
7	Oct-18	4874	3.90
8	Nov-18	3199	2.56
9	Dec-18	3538	2.83
10	Jan-19	3512	2.81
11	Feb-19	3504	2.80
12	Mar-19	4128	3.30
13	Total	49152	39.32
14	Maximum	4874	3.90
15	Minimum	3199	2.56
16	Average	4096	3.28

Chart No 2: Representation of Month wise CO_2 emissions:

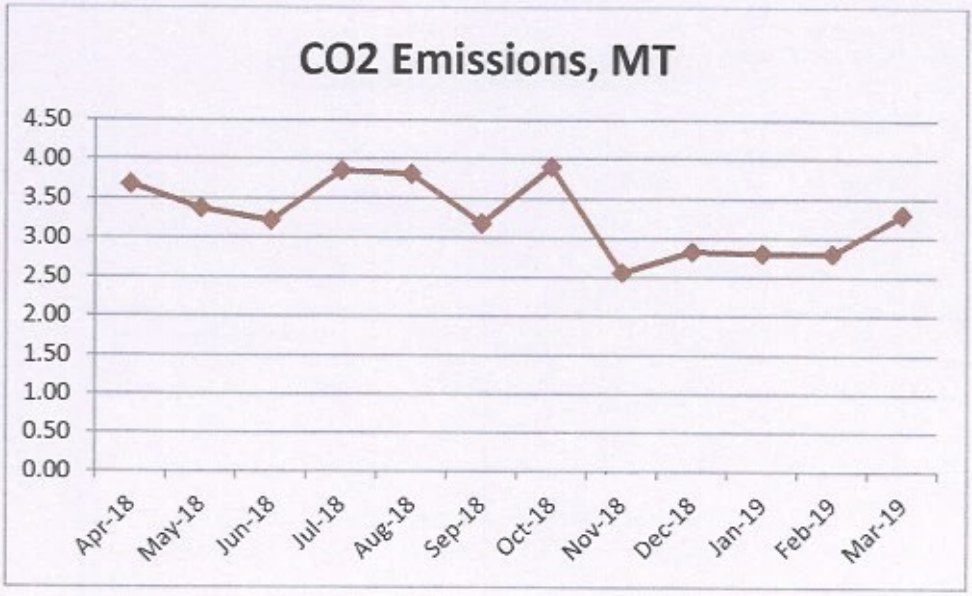

Table No 5: Key observations:

No	Parameter	Energy consumed, kWh	CO_2 Emissions, MT
1	Total	49152	39.32
2	Maximum	4874	3.90
3	Minimum	3199	2.56
4	Average	4096	3.28

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:

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 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:

SUDHAKAR JANARDHAN BOKEPHODE

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SUDHAKAR JANARDHAN BOKEPHODE

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