

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



Year: 2021-22

Prepared by

ENGRESS SERVICES

Yashashree, 26, Nirmal Bag Society
Near Muktangan English School, Parvati, Pune 411009
Phone: 09890444795 Email: engress123@gmail.com



MAHARASHTRA ENERGY DEVELOPMENT AGENCY

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@mahaaurja.com, Web: www.mahaaurja.com

ECN/2022-23/CR-43/1709 10th May, 2022

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

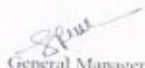
We hereby certify that, the firm having following particulars is registered with **MAHARASHTRA ENERGY DEVELOPMENT AGENCY (MEDA)** under given category as "Energy Planner & Energy Auditor" in Maharashtra for Energy Conservation Programme of MEDA.

Name and Address of the firm : M/s Engress Services
Yashshree, 26, Nirmal Bag Society,
Near Mukangan English School,
Parvati, Pune - 411 009.

Registration Category : *Empanelled Consultant for Energy Conservation Programme for Class 'A'*

Registration Number : *MEDA/ECN/2022-23/Class A/EA-32.*

- 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 **09th May, 2024** 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)

 **GEM Certificate** 

ASSOCHAM hereby certifies that
Mr. A Y Mehendale

has successfully passed the
Green and Eco-friendly Movement Certified Professional Test (GEM CP)
with
"Excellent Performance"
on
06 June, 2022

He/she is now eligible to execute the GEM Sustainability Certification Projects.
ASSOCHAM feels proud to award the GEM Certified Professional title to him/her.

Pankaj R. Dharkar
Chairman, GEM 
Deepak Sood
Secretary General, ASSOCHAM

GEM CP 22/788



ENGRESS SERVICES

Yashashree, 26, Nirmal Bag Society,
Near Muktangang English School, Parvati, Pune 411 009
Tel: 020-24220747 Email: engress123@gmail.com

Ref: ES/ASMCSIT/21-22/02

Date: 23/6/2022

CERTIFICATE

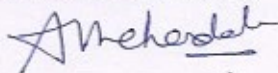
This is to certify that we have conducted Green Audit at ASM's Institute of Professional Studies, , Pimpri, Pune 411 018 in the year 2021-22.

The Institute has adopted Green Practices:

- Usage of Energy Efficient LED Fittings
- In process installation of Roof Top 2.5 kWp Solar PV Plant
- 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
- Creation of awareness on Resource Conservation by Display of Posters

We appreciate the support of Management, involvement of faculty members and students in the process of Energy Conservation & making the campus Green.

For Engress Services,



A Y Mehendale,

Certified Energy Auditor, EA-8192

ASSOCHAM GEM Certified Professional: GEM: 22/788



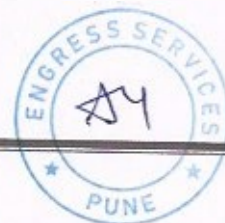
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ACKNOWLEDGEMENT

We at Engress Services, 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: 21-22

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	45345	40.81
2	Maximum	4677	4.21
3	Minimum	2942	2.65
4	Average	3779	3.40

3. Various Majors Adopted for Energy Conservation:

- Usage of Energy Efficient LED fittings
- Usage of BEE STAR Rated Equipment
- In process installation of 2.5 kWp Roof Top Solar PV Plant

4. Usage of Renewable Energy Source & CO₂ Emission Reduction:

- The Institute is in process of installation of 2.5 kWp 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 Organic Waste Management:

It is recommended to compost the organic waste like leafy and canteen waste.

5.4 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
- Creation of Awareness on Resource Conservation by Display of Posters

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

1.3 Google Earth Image:



Institute
Campus

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- 21-22:

No	Month	Energy Consumed, kWh
1	Apr-21	3109
2	May-21	2942
3	Jun-21	3544
4	Jul-21	4159
5	Aug-21	3292
6	Sep-21	3401
7	Oct-21	4137
8	Nov-21	3992
9	Dec-21	4677
10	Jan-22	4490
11	Feb-22	3782
12	Mar-22	3820
13	Total	45345
14	Maximum	4677
15	Minimum	2942
16	Average	3779

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

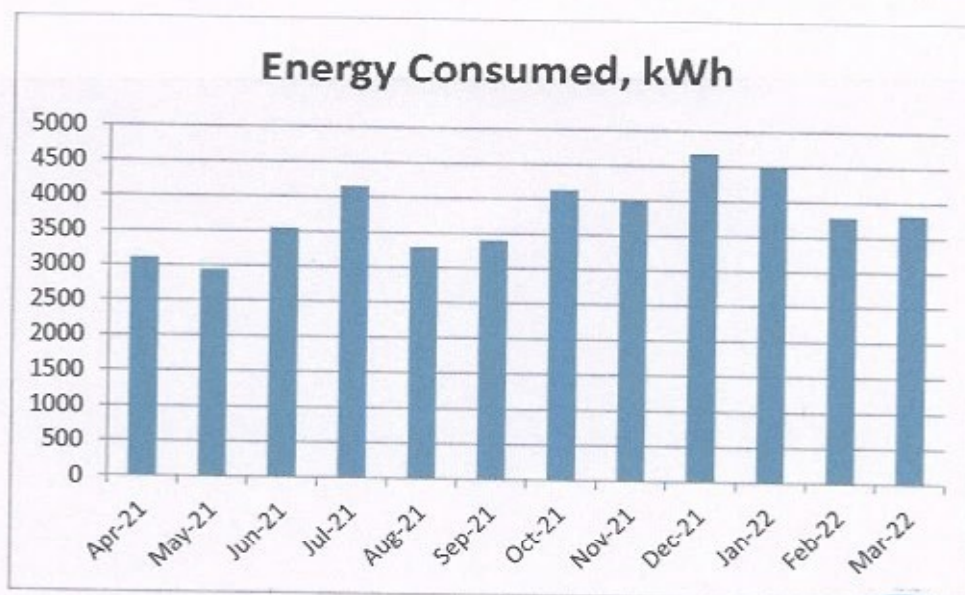


Table No 3: Important parameters:

No	Parameter	Energy consumed, kWh
1	Total	45345
2	Maximum	4677
3	Minimum	2942
4	Average	3779



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-21	3109	2.80
2	May-21	2942	2.65
3	Jun-21	3544	3.19
4	Jul-21	4159	3.74
5	Aug-21	3292	2.96
6	Sep-21	3401	3.06
7	Oct-21	4137	3.72
8	Nov-21	3992	3.59
9	Dec-21	4677	4.21
10	Jan-22	4490	4.04
11	Feb-22	3782	3.40
12	Mar-22	3820	3.44
13	Total	45345	40.81
14	Maximum	4677	4.21
15	Minimum	2942	2.65
16	Average	3779	3.40

Chart No 2: Representation of Month wise CO₂ emissions:

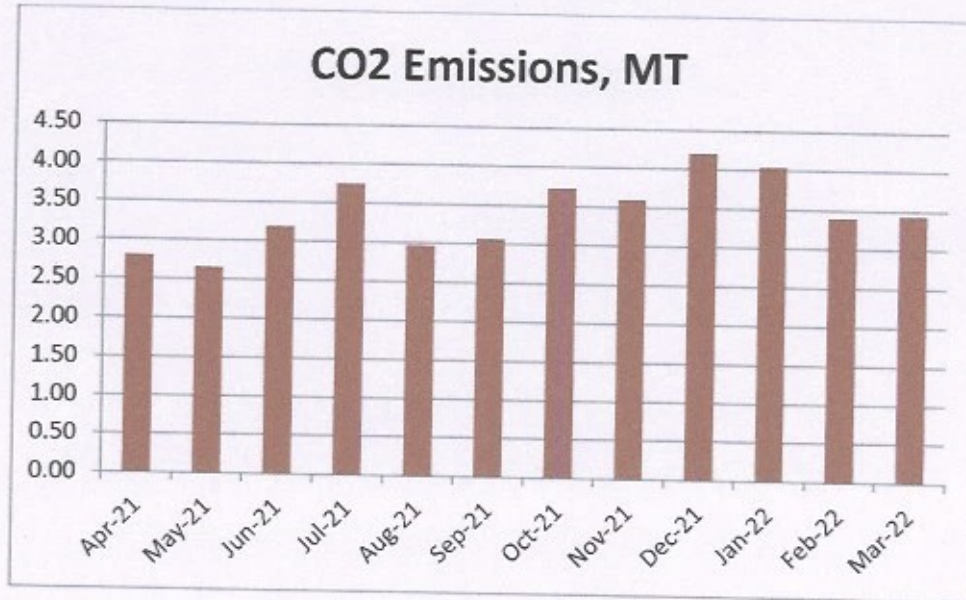


Table No 5: Key observations:

No	Parameter	Energy Consumed, kWh	CO ₂ Emissions, MT
1	Total	45345	40.81
2	Maximum	4677	4.21
3	Minimum	2942	2.65
4	Average	3779	3.40

CHAPTER-IV

STUDY OF USAGE OF RENEWABLE ENERGY

The Institute is in process of installation of 2.5 kWp 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 Organic Waste Management:

It is recommended to compost the organic waste like leafy and canteen waste.

5.4 E-Waste Management:

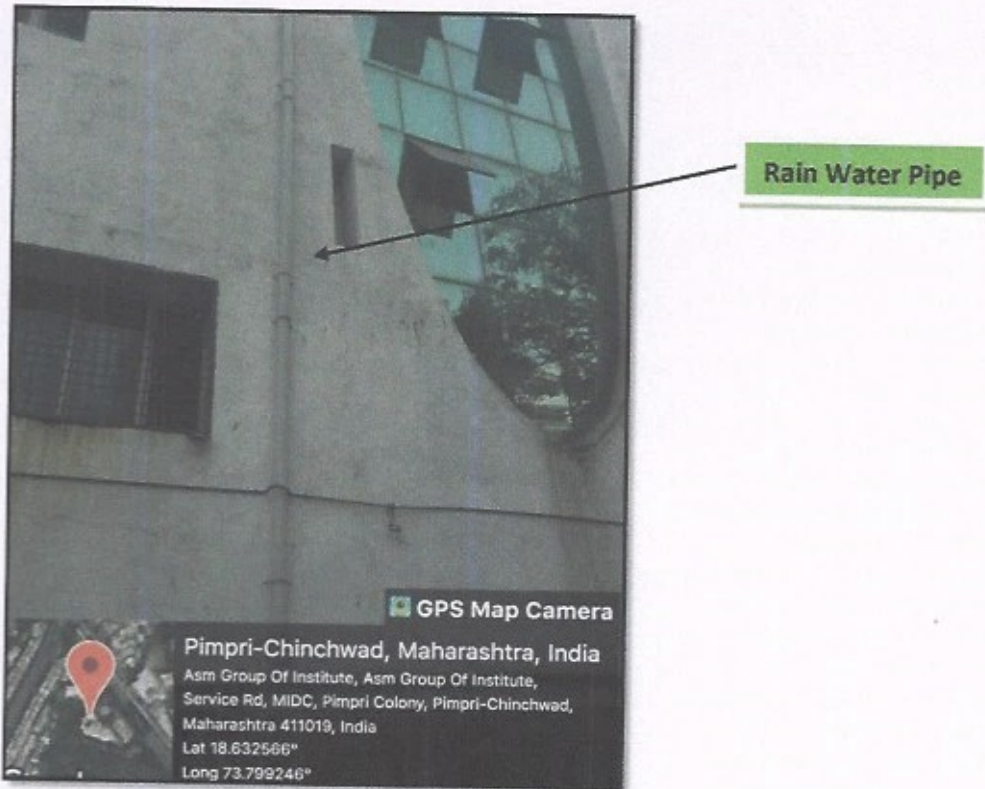
It is recommended to dispose of the E-Waste through Authorized Agency.

CHAPTER-VI

STUDY OF RAIN WATER MANAGEMENT

The Institute has implemented the Rain Water Harvesting 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:



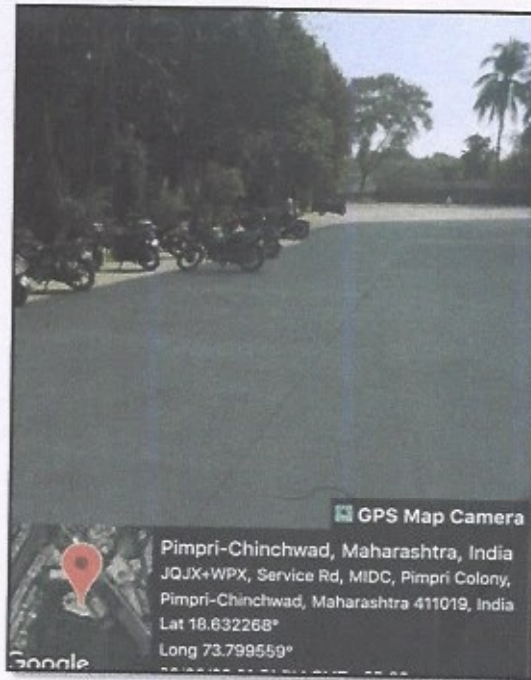
CHAPTER-VII

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.

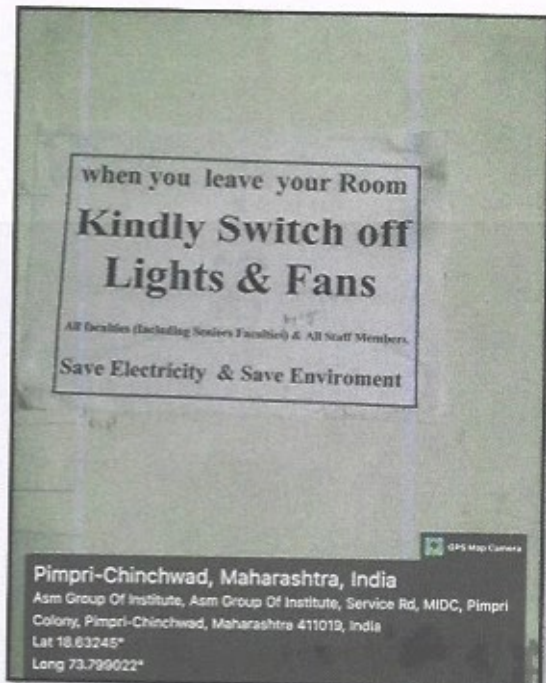
Photograph of Ramp for Divyangajan:



7.4 Creation of Awareness by Display of Posters:

The Institute has displayed posters on conservation of Resource.& Cleanliness.

Photograph of Poster Display Board on Resource Conservation & Cleanliness:



ANNEXURE

LIST OF TREES & PLANTS IN THE CAMPUS

1. List of Trees:

No	Common Name of Tree
1	Coconut
2	Mango
3	Kaduneem
4	Cluster Fig
5	Peepal
6	Vad
7	Ashoka
8	Sonchampa
9	Almond
10	Wild tamarind
11	Flame tree
12	English Tamarind
13	Charismas Tree
14	Coconut Palm
15	Palm
16	Custard apple
17	Sweet Lime
18	Nagchampa

2. List of Plants:

No	Common Name of Plant
1	Adulsa
2	Hibiscus
3	Duranta
4	Moses
5	Kardal
6	Drecena
7	Exora
8	Rhoeo
9	Croton