

GREEN AUDIT REPORT

ASM's INSTITUTE OF PROFESSIONAL STUDIES,

Pimpri, Pune 411 018



Year: 2023-24

Prepared by:

ENGRESS SERVICES

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



Registration Certificates: UDYAM, MEDA, ASSOCHAM GEM-CP, ISO: 9001 & 14001:

भारत सरकार
Government of India
सूक्ष्म, नपु एवं मध्यम उद्यम विभाग
Ministry of Micro, Small and Medium Enterprises

UDYAM REGISTRATION CERTIFICATE

UDYAM REGISTRATION NUMBER: UDYAM-MH-26-0135636

NAME OF ENTERPRISE: ENGRESS SERVICES

S.No.	Classification Year	Enterprise Type	Classification Date
1	2023-24	Micro	03/02/2024
2	2022-23	Micro	26/06/2022
3	2021-22	Micro	27/07/2021

TYPE OF ENTERPRISE: SERVICES

MAJOR ACTIVITY: GENERAL

SOCIAL CATEGORY OF ENTREPRENEUR: GENERAL

NAME OF UNIT(S): Engress Services

S.No.	Name of Unit(s)
1	Engress Services

Flat/Door/Block No.	Name of Premises/ Building	Yashashree
26		

Village/Town: Pune Block: 1

Road/Street/Lane: Lokmanya Nagar/Nirmal Baug Soc City: Pune

State: MAHARASHTRA District: PUNE, Pin 411009

Mobile: 8767447244 Email: engress12@gmail.com

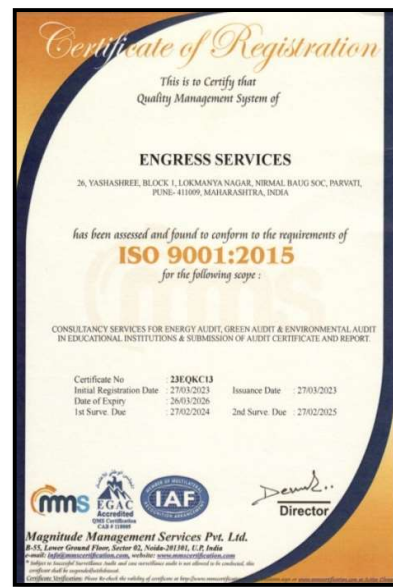
DATE OF INCORPORATION / REGISTRATION OF ENTERPRISE: 13/04/2021

DATE OF COMMENCEMENT OF PRODUCTION/BUSINESS: 13/04/2021

S.No.	NIC 2 Digit	NIC 4 Digit	NIC 5 Digit	Activity
1	79 - Activities of head offices; management consultancy activities	7920 - Management consultancy activities	79200 - Management consultancy activities	Services

NATIONAL INDUSTRY CLASSIFICATION CODE(S):

DATE OF UDYAM REGISTRATION: 27/07/2021



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@maharaja.com. Web: www.maharaja.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.

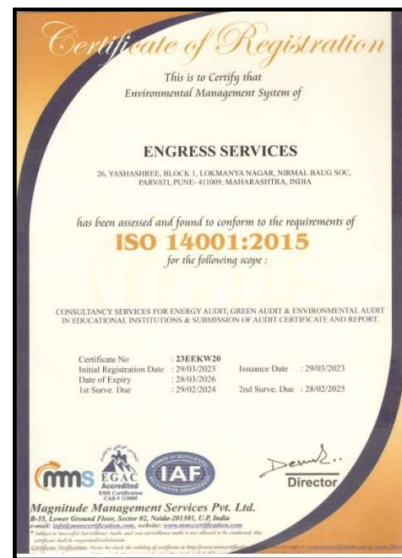
Name and Address of the firm: M/s Engress Services
Yashashree, 26, Nirmal Baug Society,
Near Muktaganj English School,
Parvati, Pune - 411 009.

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)



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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: 2023-24.

We are thankful to all the faculty and 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. Present Energy Consumption & CO₂ Emission:

No	Particulars	Value	Unit
1	Annual Energy Purchased	77035	kWh
2	Annual CO ₂ Emissions	71.64	MT

3. Usage of Renewable Energy & Reduction in CO₂ Emissions:

- The Energy Generated by **2.180 kWp** Solar PV Plant in 2023-24 is **2616 kWh**
- Equivalent Reduction in CO₂ Emissions in 2023-24 is **2.43 MT**

4. Waste Management:

No	Head	Particulars
1	Solid Waste	Segregation of Waste at source
2	Organic Waste	Arrangement of Bio Composting Bed
3	Sanitary Waste	Installed Sanitary Waste Incinerator
4	E Waste	Disposed of through 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 & Sustainable Practices:

- Maintenance of good Internal Road
- Tree Plantation in the campus.
- Provision of Ramp for Divyangajan
- Creation of awareness on Water Conservation Display of Posters

7. Assumptions:

1. **1 kWh** of Electrical Energy releases **0.93 Kg of CO₂** into atmosphere
2. Energy generated by Roof Top Solar PV Plant: **4 kWh/kWp per Day**
3. Annual Solar Energy Generation Days: **300 Nos**
4. Energy consumed is computed based on Load Utilization Factor

8. Reference:

- For CO₂ Emissions: www.ccd.gujarat.gov.in
- For Solar PV Energy Generation: www.rooftopsolar.gov.in

ABBREVIATIONS

BEE	Bureau of Energy Efficiency
kWh	Kilo Watt Hour
LPD	Liters Per Day
Kg	Kilo Gram
MT	Metric Ton
CO ₂	Carbon Di Oxide
Qty	Quantity

CHAPTER-I INTRODUCTION

1.1 Introduction:

A Green Audit is conducted at ASM's Institute of Professional Studies, Pimpri, Pune

1.2 Key Study Points:

No	Particulars
1	Study of Present Energy Consumption & CO ₂ Emission
2	Study of Usage of Renewable Energy
3	Study of Waste Management Practices
4	Study of Rain Water Management
5	Study of Green & Sustainable Initiatives

1.3 Institute Location Image:



Institute
Campus

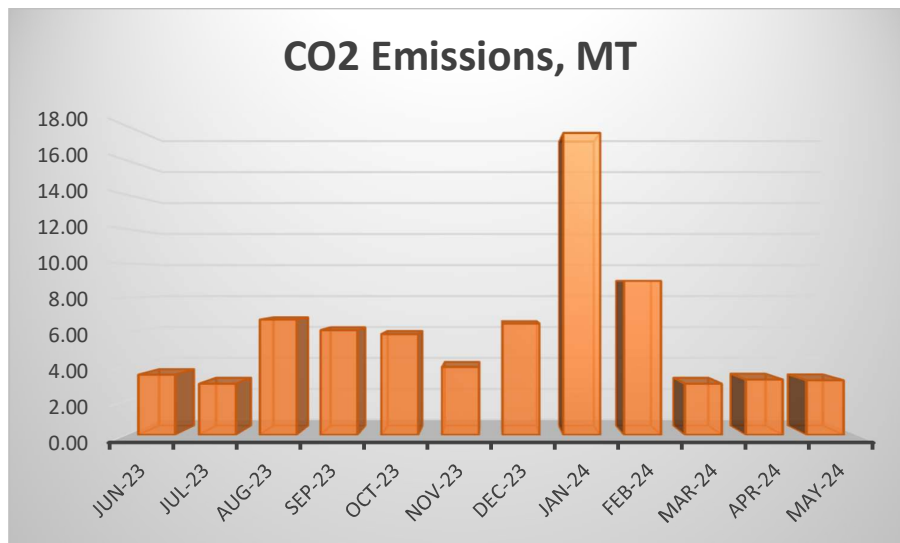
CHAPTER-II STUDY OF ENERGY CONSUMPTION & CO₂ EMISSION

A **Carbon Foot print** is defined as the Total Greenhouse Gas emissions, emitted due to various activities. **Basis for computation of CO₂ Emissions: 1 kWh of Electrical Energy releases 0.93 Kg of CO₂ into atmosphere.**

Table No 1: Month wise Energy Consumption & CO₂ Emissions:

No	Month	Energy Purchased, kWh	CO ₂ Emissions, MT
1	Jun-23	3779	3.51
2	Jul-23	3209	2.98
3	Aug-23	7231	6.73
4	Sep-23	6569	6.11
5	Oct-23	6323	5.88
6	Nov-23	4261	3.96
7	Dec-23	6979	6.49
8	Jan-24	18917	17.59
9	Feb-24	9659	8.98
10	Mar-24	3209	2.98
11	Apr-24	3472	3.23
12	May-24	3427	3.19
13	Total	77035	71.64
14	Maximum	18917	17.59
15	Minimum	3209	2.98
16	Average	6420	5.97

Chart No 1: Month wise CO₂ Emissions:



CHAPTER III

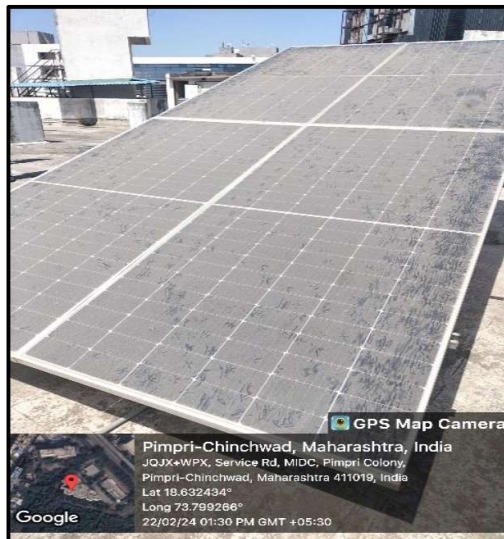
STUDY OF USAGE OF RENEWABLE ENERGY

The Institute has installed Roof Top Solar PV Plant of Capacity **2.180 kWp**.

Table No 2: Computation of Reduction in annual CO₂ Emissions:

No	Particulars	Value	Unit
1	Installed Capacity of Roof Top Solar PV Plant Capacity	2.180	kWp
2	Energy Generated in per kWp	4	4 kWh/kWp
3	Annual Solar Energy Generation Days	300	Nos
4	Energy Generated in the Year: 2023-24	2616	kWh
5	1 kWh of Electrical Energy saves	0.93	Kg/kWh
6	Qty of CO₂ Saved by Solar PV Plant = (4)*(5) /1000	2.43	MT of CO₂


Photograph of Roof Top Solar PV Plant:




CHAPTER IV STUDY OF WASTE MANAGEMENT

In this Chapter, we present the Waste Management Practices, followed by the Institute.

Details of Waste Management Practices:

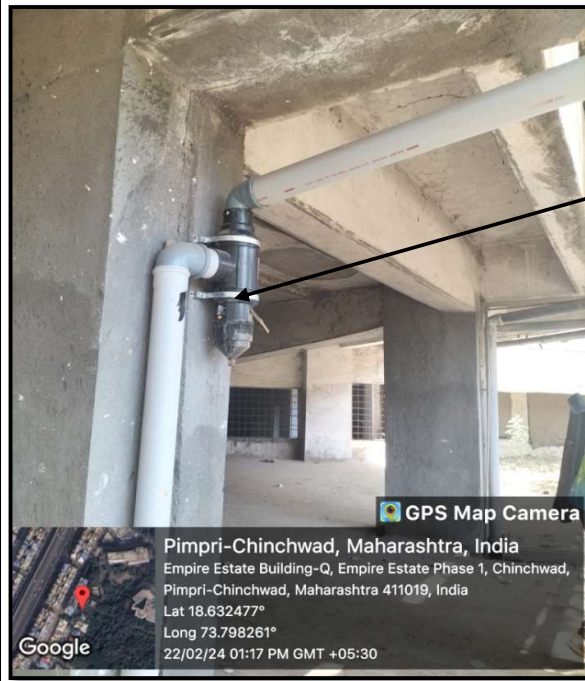
No	Head	Observation	Photograph
1	Solid Waste	Segregation of Waste at Source: Provision of Waste Collection Bins	<p>Waste Collection Bin:</p>  <p>GPS Map Camera Pimpri-Chinchwad, Maharashtra, India Asm Group Of Institute, Asm Group Of Institute, Service Rd, MIDC, Pimpri Colony, Pimpri-Chinchwad, Maharashtra 411019, India Lat 18.632343° Long 73.799168° 22/02/24 12:54 PM GMT +05:30 Google</p>
2	Organic Waste	Provision of Bio Composting Bed: For conversion of Leafy Waste	<p>Bio Composting Bed:</p>  <p>GPS Map Camera Pimpri-Chinchwad, Maharashtra, India Asm Group Of Institute, Asm Group Of Institute, Service Rd, MIDC, Pimpri Colony, Pimpri-Chinchwad, Maharashtra 411019, India Lat 18.632262° Long 73.799152° 22/02/24 01:18 PM GMT +05:30 Google</p>

3	Sanitary Waste	Dispose of through Sanitary Waste Incinerator	<p>Sanitary Waste Incinerator:</p> 
4	E Waste	Disposed of the through Authorized Agency	

CHAPTER-V 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 & Sand Filter Unit:

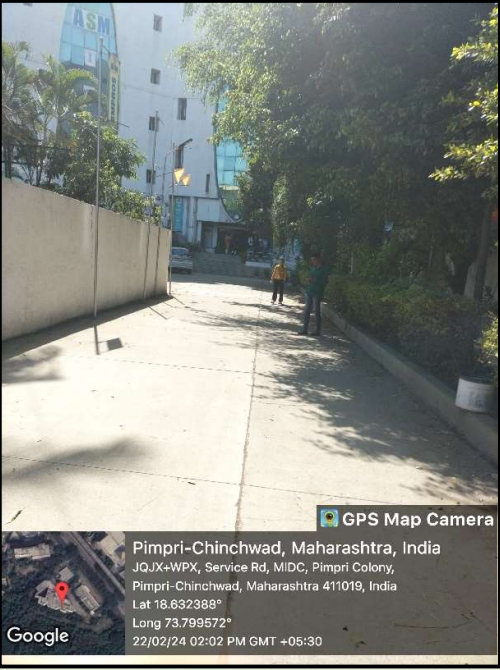



Rain Water Pipe & Sand Filter Unit

CHAPTER-VI STUDY OF GREEN & SUSTAINABLE PRACTICES

In this Chapter, we present the Green & Sustainable Practices followed by the Institute.

Green & Sustainable Practices:

No	Head	Observation	Photograph
1	<p>Easy Movement of Stake Holders</p>	<p>Provision of Good Internal Road within the Campus</p>	<p>Internal Road:</p>  <p>GPS Map Camera Pimpri-Chinchwad, Maharashtra, India JQJX+WPX, Service Rd, MIDC, Pimpri Colony, Pimpri-Chinchwad, Maharashtra 411019, India Lat 18.632388° Long 73.799572° 22/02/24 02:02 PM GMT +05:30</p>
2	<p>Tree Plantation</p>	<p>Internal Tree Plantation in the Campus</p>	<p>Internal Tree Plantation:</p>  <p>GPS Map Camera Pimpri-Chinchwad, Maharashtra, India JQJX+WPX, Service Rd, MIDC, Pimpri Colony, Pimpri-Chinchwad, Maharashtra 411019, India Lat 18.632388° Long 73.799572° 22/02/24 02:02 PM GMT +05:30</p>

<p>3</p>	<p>Facilities for Divyangajan</p>	<p>Provision of Ramp & Lift for Divyangajan</p>	<p>Ramp for Divyangajan:</p>  <p>GPS Map Camera</p> <p>Pimpri-Chinchwad, Maharashtra, India Asm Group Of Institute, Asm Group Of Institute, Service Rd, MIDC, Pimpri Colony, Pimpri-Chinchwad, Maharashtra 411019, India Lat 18.632343° Long 73.799168° 22/02/24 12:55 PM GMT +05:30</p> <p>Google</p>
<p>4</p>	<p>Creation of Awareness among Stake Holders</p>	<p>Display of Poster on Water Conservation</p>	<p>Poster on Water Conservation:</p>  <p>GPS Map Camera</p> <p>Pimpri-Chinchwad, Maharashtra, India Asm Group Of Institute, Asm Group Of Institute, Service Rd, MIDC, Pimpri Colony, Pimpri-Chinchwad, Maharashtra 411019, India Lat 18.632343° Long 73.799168° 22/02/24 12:54 PM GMT +05:30</p> <p>Google</p>

ANNEXURE-1: 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