

GREEN AUDIT REPORT

Shri Sharda Bhavan Education Society's
INSTITUTE OF TECHNOLOGY & MANAGEMENT
VIP Road, Nanded



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, लघु एवं मध्यम उद्यम मंत्रालय
Ministry of Micro, Small and Medium Enterprises

UDYAM REGISTRATION CERTIFICATE

UDYAM REGISTRATION NUMBER: UDYAM-MH-26-0135636

NAME OF ENTERPRISE: ENGRESS SERVICES

TYPE OF ENTERPRISE *

SNo.	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

MAJOR ACTIVITY: SERVICES

SOCIAL CATEGORY OF ENTREPRENEUR: GENERAL

NAME OF UNIT(S)

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

OFFICIAL ADDRESS OF ENTERPRISE

Flat/Door/Block No.	26	Name of Premises/ Building	Yashashree
Village/Town	Pune	Block	1
Road/Street/Lane	Lokmanya Nagar, Nirmal Baug Soc.	City	Pune
State	MAHARASHTRA	District	PUNE, Pin 411069
Mobile	8767447244	Email:	engress123@gmail.com

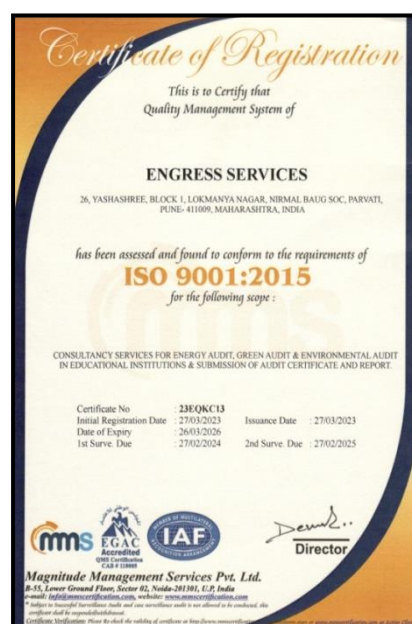
DATE OF INCORPORATION / REGISTRATION OF ENTERPRISE: 13/04/2021

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

NATIONAL INDUSTRY CLASSIFICATION CODE(S)

S.No.	NIC 2 Digit	NIC 4 Digit	NIC 5 Digit	Activity
1	70 - Activities of head offices; management consultancy activities	7020 - Management consultancy activities	70200 - Management consultancy activities	Services

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: ee@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.

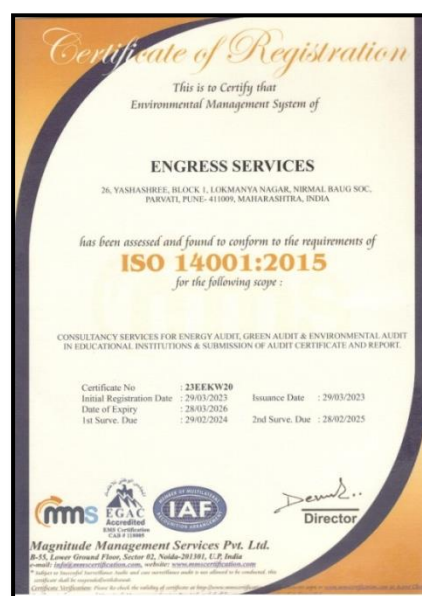
Name and Address of the firm : M/s Engress Services
Yashashree, 26, Nirmal Bag Society,
Near Mukhtangan English School,
Parvati, Pune - 411 009.

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

Registration Number : MEDA/ECN/2022-23/Class A/E-4-32.

- 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 Engress Services, Pune, express our sincere gratitude to the management of Institute of Technology & Management, Nanded for awarding us the assignment of Green Audit of their Campus for the Year: 2023-24.

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

EXECUTIVE SUMMARY

1. Institute of Technology & Management, Nanded consumes Energy in the form of **Electrical Energy**; used for various Electrical Equipment, office & other facilities.

2. Present Energy Consumption & CO₂ Emission:

No	Particulars	Value	Unit
1	Annual Energy Consumed	99540	kWh
2	Annual CO ₂ Emissions	71	MT

3. Usage of Renewable Energy:

- The College has Solar PV Plant of Capacity 60 kWp

4. Waste Management:

No	Head	Particulars
1	Solid Waste	Segregation of Waste at source
2	Organic Waste	Provision of Bio Composting Bed
3	Sanitary Waste	Provision of Sanitary Incinerator
4	E Waste	Disposed through Authorized Agency

5. Rain Water Management:

The College has installed the Rainwater Management project; the rain water falling on the terrace is collected and is used for recharging the bore well.

6. Green & Sustainable Practices:

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

7. Assumption:

1. **1 kWh** of Electrical Energy releases **0.9 Kg of CO₂** into atmosphere

8. Reference:

- For CO₂ Emissions: www.tatapower.com

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 Institute of Technology & Management, Nanded.

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 College Location Image:



College
Campus

CHAPTER-II

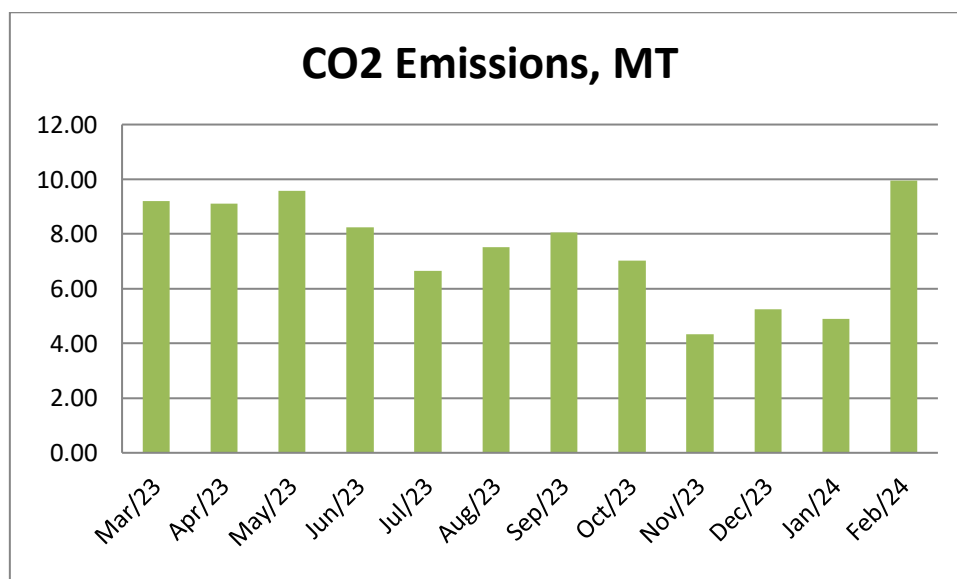
STUDY OF ENERGY CONSUMPTION & CO₂ EMISSION

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 **0.9 Kg of CO₂** into atmosphere.

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

No	Month	Energy Consumed, kWh	LPG Consumption, Kg	CO2 Emissions, MT
1	Mar-23	10211	5	9.20
2	Apr-23	10110	5	9.11
3	May-23	10623	4	9.57
4	Jun-23	9140	5	8.24
5	Jul-23	7384	6	6.66
6	Aug-23	8341	6	7.52
7	Sep-23	8925	9	8.06
8	Oct-23	7789	9	7.03
9	Nov-23	4792	8	4.33
10	Dec-23	5798	8	5.24
11	Jan-24	5402	9	4.89
12	Feb-24	11025	9	9.95
13	Total	99540	83	89.81
14	Maximum	11025	9	9.95
15	Minimum	4792	4	4.32
16	Average	8295	6.92	7.48

Chart No 1: Month wise CO₂ Emissions:



CHAPTER III

STUDY OF USAGE OF RENEWABLE ENERGY

The College has installed a **60 kWp** capacity Roof top Solar PV Plant this year.
Now we compute the Percentage of Alternate Energy to Annual Energy demand:

Table No 7: Computation of % Annual Energy Demand met by Alternate Energy:

No	Particulars	Value	Unit
1	Energy Purchased from MSEDCL	99540	kWh
2	Installed Roof Top Solar PV Plant Capacity	60	kWp
3	Average Daily Energy Generated	4	kWh/kWp
4	Annual Generation Days	300	Nos
5	Annual Solar Energy Generated	72000	kWh
6	Total Energy Demand = (1) + (5)	171540	kWh
7	Expecting % of Usage of Alternate Energy to Total Annual Energy Demand for Current Year Consumption= (5)*100/ (6)	41.97	%

Photograph of Roof Top Solar PV Plant:

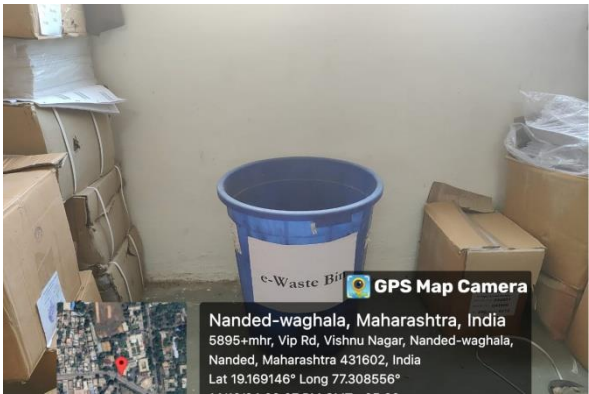


CHAPTER IV STUDY OF WASTE MANAGEMENT

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

Details of Waste Management Practices:

No	Head	Observation	Photograph
1	Solid Waste	Segregation of Waste at Source: Provision of Waste Collection Bins	Photo of Waste Collection Bin:  Altitude: 19.169895 Longitude: 77.308611 Elevation: 391.65112 m Accuracy: 23.6 m
2	Organic Waste	Provision of Bio Composting Bed: For conversion into Bio Compost	Photo of Bio Composting Bed:  GPS Map Camera Nanded, Maharashtra, India 7, Vip Rd, Jomgaokar Complex, Vishnu Nagar, Nanded, Nanded-waghala, Maharashtra 431601, India Lat 19.168927° Long 77.308963°
3	Sanitary Waste	Provision of Sanitary Incinerator	Photo of Sanitary Waste Incinerator:  Latitude: 19.169921 Longitude: 77.308616 Elevation: 391.65110 m Accuracy: 47.3 m

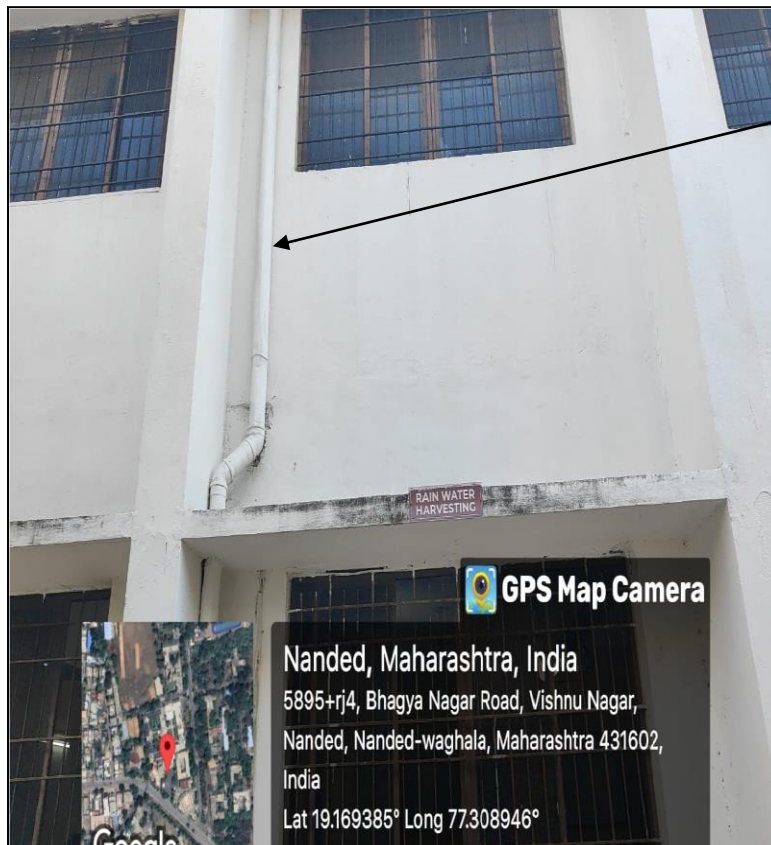
4	E Waste	Provision of E Waste Collection Bin & Disposal of E Waste through Authorized Agency	Photo of E-Waste Collection Bin:  GPS Map Camera Nanded-waghala, Maharashtra, India 5895+mhr, Vip Rd, Vishnu Nagar, Nanded-waghala, Nanded, Maharashtra 431602, India Lat 19.169146° Long 77.308556°
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CHAPTER-V

STUDY OF RAIN WATER MANAGEMENT

The College has implemented the Rain Water Management Project. The College has installed Pipes from the terrace and the Rain water falling on the terrace is gathered and is used for recharging the bore well.

Photograph of Rain Water Management Pipe & Bore well Recharge Section:



CHAPTER-VI

STUDY OF GREEN & SUSTAINABLE PRACTICES

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

Green & Sustainable Practices:

No	Head	Observation	Photograph
1	Easy Movement of Stake Holders	Provision of Good Internal Road within the Campus	Photo of Internal Road:
2	Tree Plantation	Internal Tree Plantation in the Campus	Photo of Internal Tree Plantation:
3	Facilities for Divyangajan	Provision of Ramp for Divyangajan	Ramp for Divyangajan:

4	Creation of Awareness among Stake Holders	Display of Poster on Energy Conservation	Photograph of Poster on Energy Conservation: 
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ANNEXURE-1:**LIST OF TREES & PLANTS IN THE CAMPUS:**

Presently the College Campus has more than 100 trees:

Common Name of plant	Botanical Name of Plant	Quantity
Cycas	Cycasrevoluta	2
Coconut	Cocosnucifera (L.)	12
Areca Palm	Dypsislutescens	2
Mango	Mangiferaindica	4
Custard apple	Annonasquamosa L.	1
Parijat	Nyctanthesarbortristis	1
Teak	Tectonagrandis	8
Chafa	Plumeria alba	4
Neem	Azadirachtaindica	17
Ficus	Ficusbenghalensis	1
Saptaparni	Alstoniascholaris	4
Cassia	Cassia fistula	3
Tamrind	Tamarindusindica	1
Nag Chafa	Plumeriapudica	2
Gulmohar	Delonixregia	1
Kachnar	Bauhinia variegata	1
Lemon	Citrus limon	1
Guava	Psidiumguajava	1
Karanj	Pongamiapinnata	1
Jatropha	Jatrophaintegerrima	1
Tecoma	Tecomastans	9
Ornamental Fucus	Ficusbenghalensis	3
Bougainvillia	Bauhinia variegata	1
Ficus (Umbar)	Ficusracemosa	50
Canna	Canna indica	1
Nerium	Neriumindicum	5
Ashoka	Saracaasoca	3
Agave	Agave angustifolia	2
copperieaf	Acalyphawilkesiana	4
Screw Pine	Pandanusveitchii	5
Sadaphuli	Catharanthusroseus	10
Madhumalati	Combretumindicum	1