

ENVIRONMENTAL AUDIT REPORT

Dnyanoday Prashikshana Sevabhavi Sanstha's,
FORESIGHT COLLEGE OF COMMERCE,
Rasta Peth, Pune 411 002



Year: 2023-24

Prepared by:

ENGRESS SERVICES

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



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

UDYAM REGISTRATION CERTIFICATE

UDYAM REGISTRATION NUMBER: UDYAMMH-20-012606

NAME OF ENTERPRISE: ENGRESS SERVICES

TYPE OF ENTERPRISE:

S.No.	Classification Year	Enterprise Type	Classification Unit
1	2022-24	Micro	00002024
2	2022-23	Micro	10002021
3	2021-22	Micro	27002021

MAJOR ACTIVITY: SERVICES

SOCIAL CATEGORY OF ENTREPRENEUR: GENERAL

NAME OF UNIT:

S.No.	Name of Unit
1	Engress services

CRITICAL ADDRESS OF ENTERPRISE:

Pin Code	Dist	State of Business	Telephone
411004	Pune	MAHARASHTRA	020-26111111

DATE OF INCORPORATION / REGISTRATION OF ENTERPRISE: 01/04/2022

DATE OF COMMENCEMENT OF PRODUCTION/BUSINESS: 01/04/2022

NATIONAL INDUSTRY CLASSIFICATION CODE:

S.No.	ICD Code	ICD Description	ICD Code	ICD Description	ICD Code	ICD Description
1	72	Information and communication activities	7220	Information and communication activities	7220	Information and communication activities

DATE OF UDYAM REGISTRATION: 27/07/2022



Maharashtra Energy Development Agency

Certificate of Registration for Class 'A'

We hereby certify that the firm having following particulars is registered with Maharashtra Energy Development Agency (MEDA) under group category 'A' (Energy Efficient & Energy Audit) of Maharashtra Energy Conservation Programme of APDCL.

Name and Address of the firm: M/s Engress Services, Plot No. 20, Terasrao Park, Sector 10, MIDC, Pune-411004, Maharashtra.

Registration Category: Voluntary Compliance for Energy Conservation Programme for Class 'A'

Registration Number: MEDA/EN/2022/2015-14001-1

The firm is registered to carry out the following activities:

- Energy Conservation Programme (ECP) to identify areas where wasteful use of energy occurs and to evaluate the scope for Energy Conservation and EEC activities, such as conduct the on-site energy audits.
- EEECs (Energy Efficient & Energy Audit) to identify areas where wasteful use of energy occurs and to evaluate the scope for Energy Conservation and EEC activities, such as conduct the on-site energy audits.
- The implementation of EECs (Energy Efficient & Energy Audit) to identify areas where wasteful use of energy occurs and to evaluate the scope for Energy Conservation and EEC activities, such as conduct the on-site energy audits.
- The firm is registered to carry out the following activities:



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ACKNOWLEDGEMENT

We at Engress Services, Pune, express our sincere gratitude to the management of Dnyanoday Prashikshana Sevakbhai Sanstha's Foresight College of Commerce, Pune, for awarding us the assignment of Environmental Audit of their 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. Dnyanoday Prashikshana Sevabhavi Sanstha's Foresight College of Commerce, Rasta Peth, Pune 411 002, consumes Energy in the form of **Electrical Energy**; used for various gadgets, Office & other facilities

2. Pollution due to Institute Activities:

- **Air pollution:** Mainly CO₂ on account of Electricity Consumption
- **Solid Waste:** Bio degradable Garden Waste, Paper & Plastic Waste
- **Liquid Waste:** Human liquid waste

3. Present Energy Consumption & CO₂ Emission:

No	Particulars	Value	Unit
1	Annual Energy Consumed	4864	kWh
2	Annual CO ₂ Emissions	4.52	MT

4. Usage of Renewable Energy:

- The College has yet to install Solar PV Plant.

5. Indoor Air Quality Parameters:

No	Parameter/Value	AQI	PM-2.5	PM-10
1	Maximum	80	48	60
2	Minimum	70	42	53

6. Indoor Lux & Noise Level Parameters:

No	Parameter/Value	Lux Level	Noise Level, dB
1	Maximum	241	47
2	Minimum	216	41.2

7. Waste Management:

No	Head	Particulars
1	Solid Waste	Segregation of Waste at source
2	E Waste	Recommended to dispose of through Authorized Agency

8. Rain Water Management:

The College is in process of installing the Rainwater Harvesting Project.

9. Environment Friendly Initiatives:

- Tree Plantation in the campus.
- Creation of awareness on Energy Conservation by Display of Posters

10. Assumption:

1. **1 kWh** of Electrical Energy releases **0.93 Kg of CO₂** into atmosphere

11. References:

- For CO₂ Emissions: www.ccd.gujarat.gov.in
- For Various Indoor Air Parameters: www.ishrae.com
- For AQI Quality Standards: www.cpcb.com

ABBREVIATIONS

Kg	: Kilo Gram
MSEDCL	: Maharashtra State Distribution Company Limited
MT	: Metric Ton
kWh	: kilo-Watt Hour
LPD	: Liters per Day
LED	: Light Emitting Diode
AQI	: Air Quality Index
PM-2.5	: Particulate Matter of Size 2.5 Micron
PM-10	: Particulate Matter of Size 10 Micron
CPCB	: Central Pollution Control Board
ISHRAE	: The Indian Society of Heating & Refrigerating & Air Conditioning Engineers

CHAPTER-I INTRODUCTION

1. Important Definitions:

1.1. Environment: Definition as per environment Protection Act: 1986

Environment includes water, air and land and the inter-relationship which exists among and between Water, Air, Land and Human beings, other living creatures, plants microorganism and property

1.2. Environmental Audit: Definition:

According to UNEP, 1990, "Environmental audit can be defined as a management tool comprising systematic, documented and periodic evaluation of how well environmental organization management and equipment are performing with an aim of helping to regularize the environment

1.3 Key Study Points:

No	Particulars
1	Study of Present Resource Consumption & CO ₂ Emission
2	Study of Usage of Renewable Energy
3	Study of Indoor Air Quality
4	Study of Indoor Lux & Noise Level
5	Study of Water Management
6	Study of Waste Management Practices
7	Study of Environment Friendly Practices

1.4 College Location Image:



College
Campus

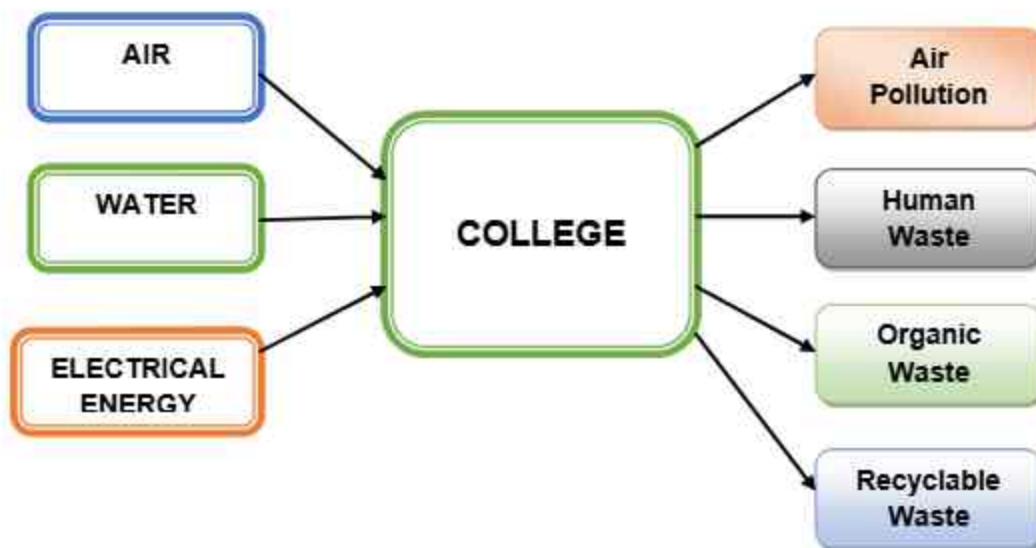
CHAPTER-II STUDY OF RESOURCE CONSUMPTION & CO₂ EMISSION

The Institute consumes following basic/derived Resources:

1. Air
2. Water
3. Electrical Energy

We try to draw a schematic diagram for the Institute System & Environment as under.

Chart No 1: Representation of Resource Requirement & Waste of a Institute:



Now we compute the Generation of CO₂ on account of consumption of Electrical Energy. The basis of Calculation for CO₂ emissions due to Electrical Energy is as under.

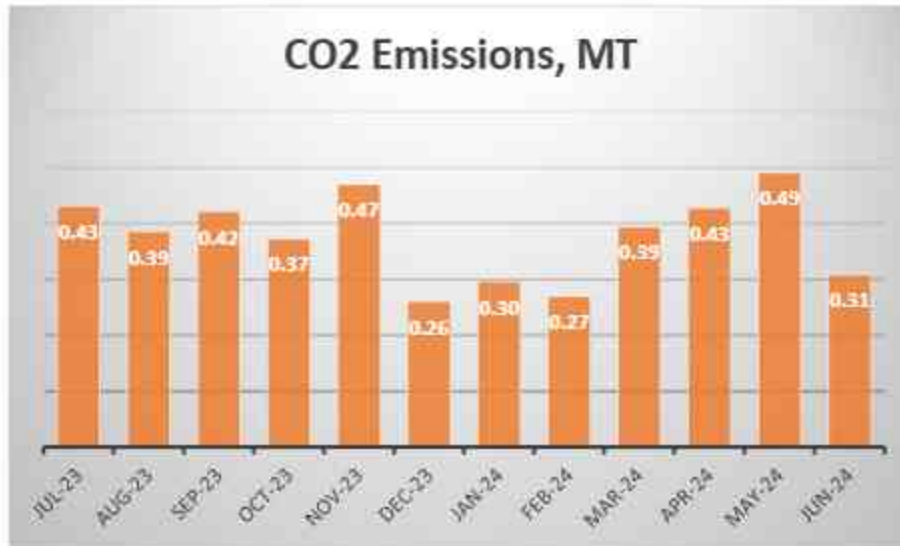
- **1 kWh** of Electrical Energy releases **0.93 Kg of CO₂** into atmosphere

Table No 1: Study of Consumption of Electrical Energy & CO₂ Emissions: 23-24:

No	Month	Energy Consumed, kWh	CO ₂ Emissions, MT
1	Jul-23	463	0.43
2	Aug-23	414	0.39
3	Sep-23	453	0.42
4	Oct-23	400	0.37
5	Nov-23	505	0.47
6	Dec-23	280	0.26
7	Jan-24	318	0.30
8	Feb-24	290	0.27
9	Mar-24	423	0.39

10	Apr-24	460	0.43
11	May-24	527	0.49
12	Jun-24	331	0.31
13	Total	4864	4.52
14	Maximum	527	0.49
15	Minimum	280	0.26
16	Average	405.33	0.38

Chart No 2: Month wise CO₂ Emissions:



CHAPTER III
STUDY OF USAGE OF RENEWABLE ENERGY

The College has yet to install Roof Top Solar PV Plant

CHAPTER IV STUDY OF INDOOR AIR QUALITY

1. **Air:** The common name given to the atmospheric gases used in breathing and photosynthesis.

2. **Air quality** is a measure of the suitability of air for breathing by people, plants and animals.

3. **Air Quality Index: Air Quality Index (AQI)** is a number used by government agencies to measure the **Air Pollution** levels and communicate it to the population.

In this Chapter, we present three important Parameters: **AQI**- Air Quality Index, **PM-2.5**- Particulate Matter of Size 2.5 micron and **PM-10**- Particulate Matter of Size 10 micron

Table No 2: Indoor Air Quality Parameters:

No	Location	AQI	PM2.5	PM10
1	Classroom	75	45	54
2	Office	76	46	56
3	IQAC	80	48	60
4	Exam Strong Room	70	42	53
5	Principal Office	71	43	53
	Maximum	80	48	60
	Minimum	70	42	53

Table No 3: Air Quality Index Values & Concentration of PM 2.5 & PM10: (By CPCB):

No	Category	AQI Value	Concentration Range, PM 2.5	Concentration Range, PM 10
1	Good	0 to 50	0 to 30	0 to 50
2	Satisfactory	51 to 100	31 to 60	51 to 100
3	Moderately Polluted	101 to 200	61 to 90	101 to 250
4	Poor	201 to 300	91 to 120	251 to 350
5	Very Poor	301 to 400	121 to 250	351 to 430
6	Severe	401 to 500	250 +	430 +

Conclusion:

From the above measured values, we conclude that the observed values of AQI, PM-2.5 & PM-10 are in the **Satisfactory Range**, as per the guidelines given by Central Pollution Control Board.

CHAPTER V STUDY OF INDOOR LUX & NOISE PARAMETERS

In this Chapter, we present the various Indoor Comfort Parameters measured during the Audit. The Parameters include: **Lux Level and Noise Level.**

Table No 4: Study of Indoor Lux Level and Noise Level Parameters:

No	Location	Lux Level	Noise Level, dB
1	Classroom	241	43.6
2	Office	219	41.2
3	IQAC	226	42
4	Exam Strong Room	216	45.6
5	Principal Office	232	47
	Maximum	241	47
	Minimum	216	41.2

Recommended Lux & Noise Level: As per BEE & ISHRAE Guidelines:

A) Noise Level Reference:		
No	Location	Noise Level Range, dB
1	Offices	45-50
2	Occupied Class Room	40-45
3	Libraries	35-40
B) Reference Lux Level, Lumens:		
1	For Class Rooms	200 Plus
2	For Reading Rooms	200 Plus

Conclusion:

From the above measured values, we conclude that:

- The Noise Level is within the prescribed Limit
- The Lux Level at various locations is Okay

CHAPTER VI STUDY OF RAIN WATER MANAGEMENT

The College is in a process of installing the Rainwater Harvesting Project.

CHAPTER-VII 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>Pune, Maharashtra, India Survey No. 352, Quarter 04th, YMCA Campus, New, Milk Colony, Waste Field, Pune, Maharashtra 411011, India Lat 18.5199° Long 75.87489°</p>
2	E Waste	Recommended to dispose of through Authorized Agency.	

CHAPTER-VIII STUDY OF ECO-FRIENDLY PRACTICES

In this Chapter, we present the Eco-Friendly Practices, followed by the Institute.

Details of Eco-Friendly Practices:

No	Head	Observation	Photograph
1	Tree Plantation	Internal Tree Plantation in the Campus	<p>Internal Tree Plantation:</p>  <p>Pune, Maharashtra, India MHCK Campus, 302, Vasa Road, Vasa, Pune, Maharashtra 411007, India Lat: 18.518889° Long: 73.071429°</p>
2	Creation of Awareness among Stake Holders	Display of Poster on Energy Conservation	<p>Poster on Energy Conservation:</p>  <p>SAVE ENERGY SAVE THE PLANET</p> <p>एकत्रित शक्ती म्हणजेच ऊर्जा कार्यक्षमता</p> <p>१. वायू वाचणे २. पाणी वाचणे ३. विद्युत वाचणे</p> <p>१. Reduce Energy Consumption 2. Save Water 3. Save Electricity</p> <p>Together, Let's Save our Energy for a brighter future.</p> <p>Pune, Maharashtra, India MHCK Campus, 302, Vasa Road, Vasa, Pune, Maharashtra 411007, India Lat: 18.518889° Long: 73.071429°</p>

ENGRESS SERVICES

Yashashree, 26, Nirmal Bag Society, Near Muktangan English School,
Parvati, Pune 411 009 Tel: 09890444795 Email: engress123@gmail.com
UDYAM Regn. No: UDYAM-MH-26-0135636,
MEDA Regn. No: ECN/2023-24/CR-43/1709
ISO: 9001-2015 Certified (Cert No: 23EQKC13),
ISO: 14001-2015 Certified (Cert No: 23EEKW20)



ENVIRONMENTAL AUDIT CERTIFICATE

Certificate No: ES/DPSSFCC/23-24/03

Date: 14/7/2024

This is to certify that we have conducted Environmental Audit at **Dnyanoday Prashikshana Sevabhavi Sanstha's Foresight College of Commerce**, Rasta Peth, Pune 411 002 in the year 2023-24.

The College has adopted following Environment Friendly Practices:

- Usage of Energy Efficient LED Fittings
- Maximum Usage of Day Lighting
- Segregation of Waste at source
- Tree Plantation in the campus
- Creation of awareness on Energy 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 Eco Friendly.

For Engress Services,

A Y Mehendale,
B E- Mech, M Tech-Energy, Certified Energy Auditor, EA-8192
ASSOCHAM GEM Certified Professional: GEM: 22/788



ENERGY AUDIT REPORT

Dnyanoday Prashikshana Sevabhavi Sanstha's,
FORESIGHT COLLEGE OF COMMERCE,
Rasta Peth, Pune 411 002



Year: 2023-24

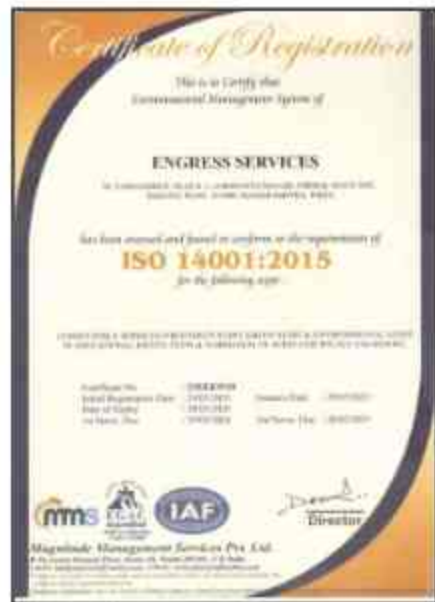
Prepared by:

ENGRESS SERVICES

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



REGISTRATION CERTIFICATES: BEE, UDYAM, MEDA, ISO-9001 & 14001:



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ACKNOWLEDGEMENT

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

EXECUTIVE SUMMARY

1. Dnyanoday Prashikshana Sevabhavi Sanstha's Foresight College of Commerce, Rasta Peth, Pune 411 002, consumes Energy in the form of **Electrical Energy**; used for various gadgets, Office & other facilities.

2. Present Connected Load & Energy Consumption:

No	Particulars	Value	Unit
1	Total Connected Load	12.435	kW
2	Annual Energy Consumed	4864	kWh

3. Per Capita Energy Consumption:

No	Particulars	Value	Unit
1	Total Annual Energy Consumed	4864	kWh
2	Total No of Students	706	Nos
3	Per Capita Energy Consumption= (1) / (2)	6.89	kWh/Annum

4. Study of % Usage of LED Lighting:

No	Particulars	Value	Unit
1	% of Usage of LED Lighting to Total Lighting Load	90	%

5. Renewable Energy & Energy Efficiency Projects:

- Usage of Energy Efficient LED fittings
- Usage of BEE STAR Rated Equipment

6. Assumption:

1. 1 kWh of Electrical Energy releases 0.93 Kg of CO₂ into atmosphere

7. References:

- Audit Methodology: www.mahaurja.com
- Energy Conservation Building Code: ECBC-2017: www.beeindia.gov.in
- For CO₂ Emissions: www.ccd.gujarat.gov.in

ABBREVIATIONS

LED	:	Light Emitting Diode
MSEDCL	:	Maharashtra State Electricity Distribution Company Limited
BEE	:	Bureau of Energy Efficiency
ECBC	:	Energy Conservation Building Code
MEDA	:	Maharashtra Energy Development Agency
PV	:	Photo Voltaic
Kg	:	Kilo Gram
kWh	:	kilo-Watt Hour
CO ₂	:	Carbon Di Oxide
MT	:	Metric Ton

CHAPTER-I INTRODUCTION

1.1 Introduction:

An Energy Audit is conducted Dnyanoday Prashikshana Sevabhavi Sanstha's Foresight College of Commerce YMCA Complex, Rasta Peth, Pune.

The guidelines followed for conducting the Energy Audit are:

- BEE India's Energy Conservation Building Code: ECBC-2017
- Maharashtra Energy Development Agency (www.mahaurja.com)
- Tata Power: www.tatapower.com

1.2 Key Study Points:

No	Particulars
1	Study of Present Connected Load
2	Study of Present Energy Consumption
3	Study of Per Capita Energy Consumption
4	Study of Lighting
5	Study of Energy Efficiency & Renewable Energy

1.3 College Location Image:



College
Campus

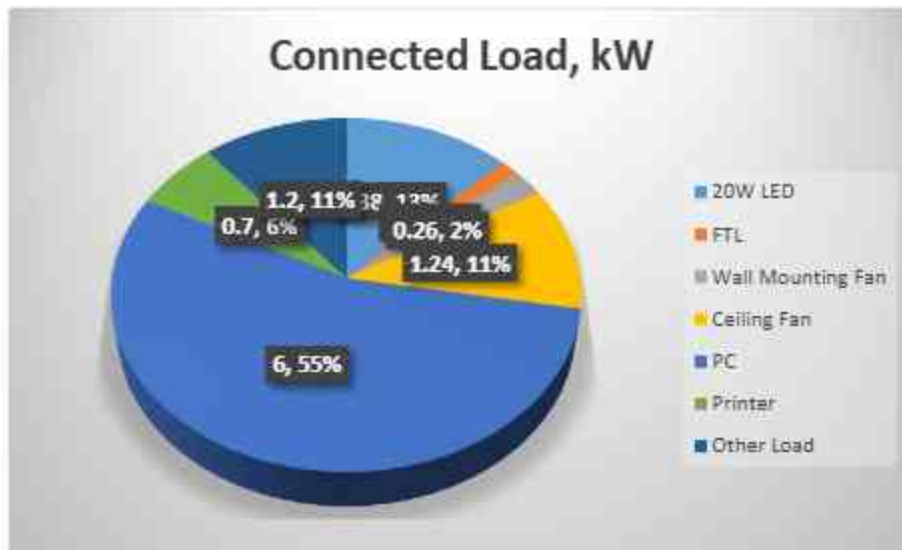
CHAPTER-II STUDY OF CONNECTED LOAD

The major contributors to the connected load of the Institute include:

Table No 1: Study of Equipment wise Connected Load:

No	Equipment	Qty	Load, W/Unit	Load, kW
1	20W LED	69	20	1.38
2	FTL	4	40	0.16
3	Wall Mounting Fan	5	52	0.26
4	Ceiling Fan	19	65	1.235
5	PC	50	150	7.5
6	Printer	4	175	0.7
7	Other Load	6	200	1.2
8	Total			12.435

Chart No 1: Study of Connected Load:



CHAPTER-III STUDY OF PRESENT ENERGY CONSUMPTION

In this chapter, we present the analysis of Electrical Energy Consumption.

Table No 2: Electrical Energy Consumption Analysis- 2023-24:

No	Month	Energy Consumed, kWh	CO ₂ Emissions, MT
1	Jul-23	463	0.43
2	Aug-23	414	0.39
3	Sep-23	453	0.42
4	Oct-23	400	0.37
5	Nov-23	505	0.47
6	Dec-23	280	0.26
7	Jan-24	318	0.30
8	Feb-24	290	0.27
9	Mar-24	423	0.39
10	Apr-24	460	0.43
11	May-24	527	0.49
12	Jun-24	331	0.31
13	Total	4864	4.52
14	Maximum	527	0.49
15	Minimum	280	0.26
16	Average	405.33	0.38

Chart No 2: Monthly Energy Consumption Details:



CHAPTER-IV

STUDY OF PER CAPITA ENERGY CONSUMPTION

Per Capita Energy Consumption Index: Per Capita Energy Consumption Index of an educational Institute/Institute is its Annual Energy Consumption in Kilo Watt Hours per student studying in the Institute/Institute.

It is determined by:

$$\text{Per Capita Energy Consumption Index} = \frac{\text{Annual Energy Consumption in kWh}}{\text{(Total No of students studying)}}$$

Table No 3: Computation of Per Capita Energy Consumption:

No	Particulars	Value	Unit
1	Total Annual Energy Consumed	4864	kWh
2	Total No of Students	706	Nos
3	Per Capita Energy Consumption= (1) / (2)	6.89	kWh/Annum

CHAPTER-V

STUDY OF LIGHTING

Terminology:

1. Lumen is a unit of light flow or luminous flux. The lumen rating of a lamp is a measure of the total light output of the lamp. The most common measurement of light output (or luminous flux) is the lumen. Light sources are labeled with an output rating in lumens.

2. Lux is the metric unit of measure for illuminance of a surface. One lux is equal to one lumen per square meter.

3. Circuit Watts is the total power drawn by lamps and ballasts in a lighting circuit under assessment.

4. Installed Load Efficacy is the average maintained illuminance provided on a horizontal working plane per circuit watt with general lighting of an interior. Unit: lux per watt per square metre (lux/W/m²)

5. Lighting Power Density: It is defined as Total Lighting Load in a room divided by the Area of that Room in square meters.

In this Chapter we compute the percentage usage of LED Lighting to total Lighting Load of the Institute.

Now, we compute the usage of LED Lighting to Total Lighting Load, as under.

Table No 4: Percentage Usage of LED Lighting to Total Lighting Load:

No	Particulars	Value	Unit
1	40 W FTL Fitting	4	Nos
2	Demand of 40 W FTL Fitting	40	W/Unit
3	Load of 40 W FTL Fitting	0.16	kW
4	20 W LED Fitting	69	Nos
5	Demand of 20 W LED Fitting	20	W/Unit
6	Load of 20 W LED Fitting	1.38	kW
7	Total Lighting Load = 3+6	1.54	kW
8	Total LED Lighting Load = 6	1.38	kW
9	% of Usage of LED to Total Lighting Load = $8 \times 100 / 7$	90	%

CHAPTER-VI

STUDY OF RENEWABLE ENERGY & ENERGY EFFICIENCY

6.1 Usage of Renewable Energy:

The College has yet to install Roof Top Solar PV Plant

6.2 Energy Efficiency Measures adopted:

- The Institute has Energy Efficient LED Fittings.
- Usage of BEE STAR Rated Equipment

Photographs of LED Lighting:



ENGRESS SERVICES

Yashashree, 26, Nirmal Bag Society, Near Mukhtangan English School,
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The College has adopted following Energy Efficient Practices:

- Usage of Energy Efficient LED Fittings
- Maximum usage of Day Lighting

We appreciate the support of Management, involvement of faculty members and students in the process of making the Campus Energy Efficient.

For Engress Services,

A Y Mehendale,
B E-Mechanical, M Tech- Energy
BEE Certified Energy Auditor, EA-8192



GREEN AUDIT REPORT

Dnyanoday Prashikshana Sevabhavi Sanstha's,
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Rasta Peth, Pune 411 002



Year: 2023-24

Prepared by:

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UDYAM REGISTRATION NUMBER: UDYAMMH-20-012606

NAME OF ENTERPRISE: ENGRESS SERVICES

TYPE OF ENTERPRISE:

S.No.	Classification Year	Enterprise Type	Classification Unit
1	2022-24	Micro	04002024
2	2022-23	Micro	10402021
3	2021-22	Micro	27002021

MAJOR ACTIVITY: SERVICES

SOCIAL CATEGORY OF ENTREPRENEUR: GENERAL

NAME OF UNIT:

S.No.	Name of Unit
1	Engress services

CRITICAL ADDRESS OF ENTERPRISE:

Pin Code	Dist	State of Business	Telephone
411004	Pune	MAHARASHTRA	020-26123456

DATE OF INCORPORATION / REGISTRATION OF ENTERPRISE: 01/04/2022

DATE OF COMMENCEMENT OF PRODUCTION/BUSINESS: 01/04/2022

NATIONAL INDUSTRY CLASSIFICATION CODE:

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1	92.11	Information and communication activities	92.11	Information and communication activities

DATE OF UDYAM REGISTRATION: 27/07/2022



Maharashtra Energy Development Agency

24/08/2022 23:00:41:1700 07 Sep 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 green category as "Energy Efficient & Energy Auditor" of Maharashtra for Energy Conservation Programme of APDR.

Name and Address of the firm: Mr. Vigyan Services, Plot No. 28, Terasa Park Society, Near Maharashtra English School, Pune, Pune - 411 006

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

Registration Number: MEDA/ECN/2022/012606-02A-1-C

The firm is registered to carry out the following activities:

- Energy Conservation Programme (to be carried out as per the guidelines laid down in the Energy Conservation Act, 2001 and the Energy Conservation Rules, 2002)
- Energy audits (to be carried out as per the guidelines laid down in the Energy Conservation Act, 2001 and the Energy Conservation Rules, 2002)
- The registration is valid till 31/03/2023
- The Director General, MEDA, reserves the right to cancel the registration at any time without assigning any reason thereof.



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

EXECUTIVE SUMMARY

1. Dnyanoday Prashikshana Sevabhavi Sanstha's Foresight College of Commerce, Rasta Peth, Pune 411 002, 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 Consumed	4864	kWh
2	Annual CO ₂ Emissions	4.52	MT

3. Usage of Renewable Energy:

- The College has yet to install Solar PV Plant.

4. Waste Management:

No	Head	Particulars
1	Solid Waste	Segregation of Waste at source
2	E Waste	Recommended to dispose of through Authorized Agency

5. Rain Water Management:

The College is in process of installing the Rainwater Harvesting Project.

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 by Display of Posters

7. Assumption:

1. 1 kWh of Electrical Energy releases 0.93 Kg of CO₂ into atmosphere

8. Reference:

- For CO₂ Emissions: www.ccd.gujarat.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 Dnyanoday Prashikshana Sevabhavi Sanstha's Foresight College of Commerce YMCA Complex, Rasta Peth, 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 College Location Image:



College
Campus

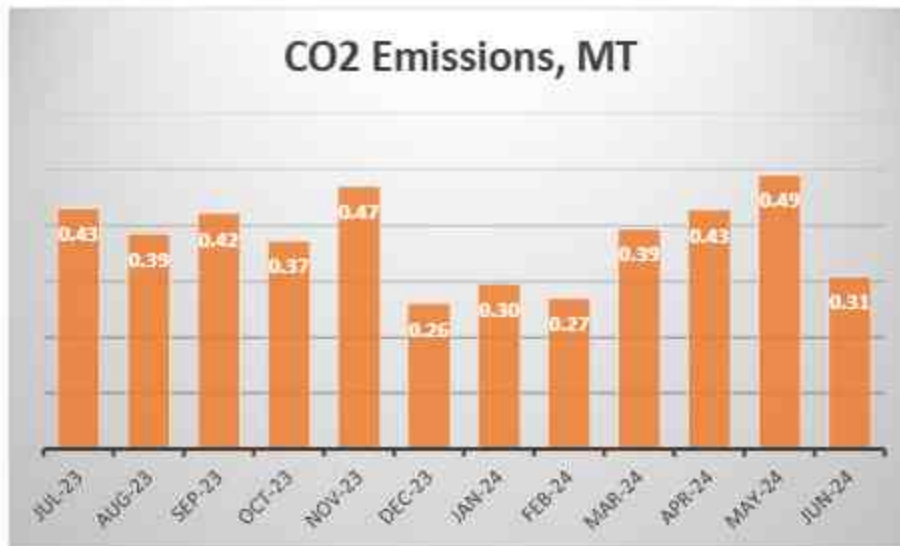
CHAPTER-II STUDY OF ENERGY CONSUMPTION & CO₂ EMISSION

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 0.93 Kg of CO₂ into atmosphere.**

Table No 1: Month wise CO₂ Emissions:

No	Month	Energy Consumed, kWh	CO ₂ Emissions, MT
1	Jul-23	463	0.43
2	Aug-23	414	0.39
3	Sep-23	453	0.42
4	Oct-23	400	0.37
5	Nov-23	505	0.47
6	Dec-23	280	0.26
7	Jan-24	318	0.30
8	Feb-24	290	0.27
9	Mar-24	423	0.39
10	Apr-24	460	0.43
11	May-24	527	0.49
12	Jun-24	331	0.31
13	Total	4864	4.52
14	Maximum	527	0.49
15	Minimum	280	0.26
16	Average	405.33	0.38

Chart No 1: Month wise CO₂ Emissions:



CHAPTER III
STUDY OF USAGE OF RENEWABLE ENERGY

The College has yet to install 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> 
2	E Waste	Recommended to dispose of through Authorized Agency.	

CHAPTER-V



STUDY OF RAIN WATER MANAGEMENT

The College is in a process of installing the Rainwater Harvesting Project.

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	Easy Movement of Stake Holders	Provision of Good Internal Road within the Campus	<p>Internal Road:</p>  <p>The photograph shows a wide, paved internal road within a campus. A white van is parked on the right side of the road. The road is flanked by buildings and trees, and the overall environment appears clean and well-maintained. A GPS overlay at the bottom of the image indicates the location is in Pune, Maharashtra, India.</p>
2	Tree Plantation	Internal Tree Plantation in the Campus	<p>Internal Tree Plantation:</p>  <p>The photograph shows a tall palm tree in a campus setting. The tree is the central focus, with its fronds reaching towards the sky. In the background, there are buildings and other trees, suggesting a well-landscaped campus. A GPS overlay at the bottom of the image indicates the location is in Pune, Maharashtra, India.</p>

3	Facilities for Divyangajan	Provision of ramp for Divyangajan	<p>Ramp for Divyangajan:</p> 
4	Creation of Awareness among Stake Holders	Display of Poster on Energy Conservation	<p>Poster on Energy Conservation:</p> 

ANNEXURE-1:
LIST OF TREES & PLANTS IN THE CAMPUS:

No	Common Name of Tree/Plant
1	Ticoma
2	Hibiscus
3	Audumbar
4	Curry Leaves
5	Peace Lily
6	Papaya
7	Agelia
8	Ceditica
9	Aloe Vera
10	Neem
11	Rohdea
12	Coconut
13	Mango
14	Palm
15	Moneyplant
16	Coleus
17	Umberella Palm
18	Bahava
19	Morpankhi
20	Ashoka
21	Cow's Foot
22	Ticoma
23	Hibiscus
24	Audumbar
25	Curry Leaves
26	Peace Lily
27	Papaya

ENGRESS SERVICES

Yashashree, 26, Nirmal Bag Society, Near Muktangan English School,
Parvati, Pune 411 009 Tel: 09890444795 Email: engress123@gmail.com
UDYAM Regn. No: UDYAM-MH-26-0135636,
MEDA Regn. No: ECN/2023-24/CR-43/1709
ISO: 9001-2015 Certified (Cert No: 23EQKC13),
ISO: 14001-2015 Certified (Cert No: 23EEKW20)



GREEN AUDIT CERTIFICATE

Certificate No: ES/ DPSSFCC /23-24/02

Date: 14/7/2024

This is to certify that we have conducted Green Audit at **Dnyanoday Prashikshana Sevabhavi Sanstha's Foresight College of Commerce**, Rasta Peth, Pune 411 002 in the year 2023-24.

The College has adopted following Green & Sustainable Practices:

- Usage of Energy Efficient LED Fittings
- Maximum Usage of Day Lighting
- Segregation of Waste at source
- Good Internal Road
- Tree Plantation in the campus
- Provision of Ramp for Divyangajan
- Creation of awareness on Energy 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,

B E- Mech, M Tech-Energy, Certified Energy Auditor, EA-8192
ASSOCHAM GEM Certified Professional: GEM: 22/788

