GREEN AUDIT REPORT

of

Sane Guruji Shikshan Prasarak Mandal, Nashik Road, ART'S AND COMMERCE COLLEGE, BARAGAON PIMPRI

Taluka: Sinnar, District: Nashik 422 103

Year: 2017-18

Prepared by

ENRICH CONSULTANTS

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



MAHARASHTRA ENERGY DEVELOPMENT AGENCY



Maharashtra Energy Development Agency (A Government of Maharashtra undertaking)

(A Government of Maharashtra undertaking)

2nd Floor, MHADA Commercial Complex, Opp. Tridal Nagar, Yerwada, Pune 411 006
Ph No: 020-26614393/266144403, Fax No: 020-26615031
Email: econ@mahaurja.com, Web: www.mahaurja.com

ECN/2017-18/CR-01/5726

30th November 2017

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 under Save Energy Programme of MEDA.

Name and Address of the firm : E

Enrich Consultants

Yashashree, Plot No. 26, Nirmal Baug Society, Parvati, Pune - 411009.

Registration Category

Empanelled Consultant for Save Energy

Programme.

Registration Number

MEDA/ECN/CR-01/2017-18/EA-37

- The Save Energy 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 upto 3 year from the date of registration, to carry out energy audits under the Save Energy Programme of MEDA.
- The Director General, MEDA reserves the right to cancel the registration at any time without assigning any reasons thereof.

(Smita Kudarikar) Manager (EC)



Enrich Consultants

Yashashree, 26, Nirmal Bag Society, Near Muktangan English School, Parvati, Pune 411 009 Tel: 09890444795 Email: enrichcons@gmail.com

Ref: EC/ ACCS/17-18/02

Date: 4/7/2018

CERTIFICATE

This is to certify that we have conducted Green Audit at Sane Guruji Shikshan Prasarak Mandal, Nashik Road, Art's and Commerce College, Baragaon Pimpri, Tal: Sinnar, District: Nashik in the year 2017-18.

The College has adopted following Green Practices:

- Maximum Usage of Day Lighting
- Usage of Energy Efficient LED Fittings
- > Segregation of Waste at source
- 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,

AMohandal

A Y Mehendale,

BE- Mechanical, M Tech- Energy, Certified Energy Auditor: EA-8192 CONSULT TO THE PROPERTY OF THE

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ACKNOWLEDGEMENT

We Enrich Consultants, Pune, express our sincere gratitude to the management of Sane Guruji Shikshan Prasarak Mandal, Nashik Road, Art's and Commerce College, Baragaon Pimpri, Taluka: Sinnar, District: Nasik, for awarding us the assignment of Green Audit of their College Campus for the Year: 17-18.

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



EXECUTIVE SUMMARY

1. Sane Guruji Shikshan Prasarak Mandal, Nashik Road, Art's and Commerce College, Baragaon Pimpri, Taluka: Sinnar, District: Nashik 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	700	0.56
2	Maximum	115	0.09
3	Minimum	28	0.02
4	Average	58.33	0.05

3. Various Measures Adopted for Energy Conservation:

- Usage of Energy Efficient LED fittings
- Maximum Usage of Day Lighting

4. Usage of Renewable Energy Source:

The College has yet to install 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.

6. Rain Water Management:

The College has yet to install the Rainwater Management Project.

7. Green Practices:

- Good Internal Roads
- Internal Tree Plantation

8. Assumption:

• 1 kWh (Unit) of Electrical Energy releases 0.8 Kg of CO2 into atmosphere



ABBREVIATIONS

LED : Light Emitting Diode

kWh : kilo-Watt Hour

MT : Metric Ton

CO₂ : 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 Practices

1.2 Table No-1: General Details of College:

No	Head	Particulars	
1 Name Sane Guruji Shikshan Prasarak Mandal, Nasik Road, Art's Commerce College			
2	Address	Baragaon Pimpri, Taluka: Sinnar, District: Nashik 422 103	
3	Affiliation	Savitribai Phule Pune University	

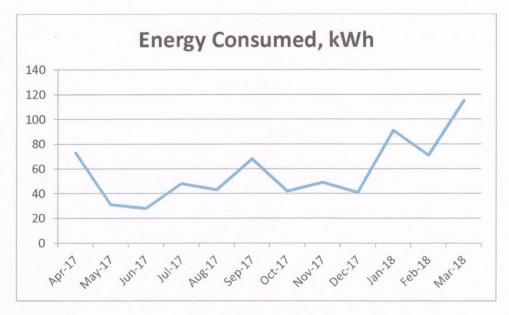


CHAPTER-II STUDY OF PRESENT ENERGY CONSUMPTION

In this chapter, we present the analysis of last year Electricity Energy Consumption Table No 2: Electrical Energy Consumption Analysis- 17-18:

No	Month	Energy Consumed, kWh	
1	Apr-17	73	
2	May-17	31	
3	Jun-17	28	
4	Jul-17	48	
5	Aug-17	43	
6	Sep-17	68	
7	Oct-17	42	
8	Nov-17	49	
9	Dec-17	41	
10	Jan-18	91	
11	Feb-18	71	
12	Mar-18	115	
13	Total	700	
14	Maximum	115	
15	Minimum	28	
16	Average	58.33	

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





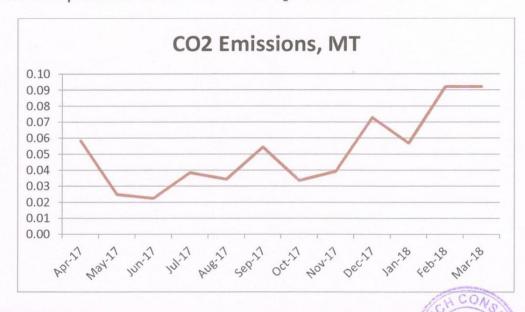
CHAPTER-III CARBON FOOT PRINTING

A Carbon Foot print is defined as the Total Greenhouse Gas emissions, emitted due to various activities. Basis for computation of CO_2 Emissions: 1 Unit (kWh) of Electrical Energy releases 0.8 Kg of CO_2 into atmosphere.

Table No 3: Month wise CO₂ Emissions:

No	Month	Energy Consumed, kWh	CO ₂ Emissions, MT
1	Apr-17	73	0.06
2	May-17	31	0.02
3	Jun-17	28	0.02
4	Jul-17	48	0.04
5	Aug-17	43	0.03
6	Sep-17	68	0.05
7	Oct-17	42	0.03
8	Nov-17	49	0.04
9	Dec-17	41	0.07
10	Jan-18	91	0.06
11	Feb-18	71	0.09
12	Mar-18	115	0.09
13	Total	700	0.56
14	Maximum	115	0.09
15	Minimum	28	0.02
16	Average	58.33	0.05

Chart No 2: Representation of Month wise CO₂ emissions:



Am Jan

CHAPTER-IV STUDY OF USAGE OF RENEWABLE ENERGY

• The College has yet to install 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 College has yet to implement the Rain Water Management Project.



CHAPTER-VII STUDY OF GREEN PRACTICES

7.1 Pedestrian Friendly Road:

The College 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 College has well maintained Tree Plantation.

Photograph of Tree Plantation:



GREEN AUDIT REPORT

of

Sane Guruji Shikshan Prasarak Mandal, Nashik Road,
ART'S AND COMMERCE COLLEGE, BARAGAON PIMPRI

Taluka: Sinnar, District: Nashik 422 103

Year: 2018-19

Prepared by

ENRICH CONSULTANTS

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



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Email: eee@mahaurja.com, Web: www.mahaurja.com

ECN/2018-19/CR-05/4174

19th September, 2018

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,

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Registration Category

Empanelled Consultant for Energy Conservation

Programme

Registration Number

MEDA/ECN/CR-05/2018-19/EA-03

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(Smita Kudarikar) General Manager (EC)



Enrich Consultants

Yashashree, 26, Nirmal Bag Society, Near Muktangan English School, Parvati, Pune 411 009 Tel: 09890444795 Email: enrichcons@gmail.com

Ref: EC/ ACCS/18-19/02

Date: 10/6/2019

CERTIFICATE

This is to certify that we have conducted Green Audit at Sane Guruji Shikshan Prasarak Mandal, Nashik Road, Art's and Commerce College, Baragaon Pimpri, Tal: Sinnar, District: Nashik in the year 2018-19.

The College has adopted following Green Practices:

- Usage of Energy Efficient LED Fittings
- Segregation of Waste at source
- > Maintenance of Good Internal Road
- > 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,

Mehanda

A Y Mehendale,

Certified Energy Auditor,

EA-8192



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EXECUTIVE SUMMARY

- 1. Sane Guruji Shikshan Prasarak Mandal, Nashik Road, Art's and Commerce College, Baragaon Pimpri, Taluka: Sinnar, District: Nashik 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	895	0.72
2	Maximum	167	0.13
3	Minimum	34	0.03
4	Average	74.58	0.06

- 3. Various Measures Adopted for Energy Conservation:
 - Usage of Energy Efficient LED fittings & Maximum Usage of Day Lighting
- 4. Usage of Renewable Energy Source:
 - The College has yet to install Solar PV Plant.
- 5. Waste Management:

Segregation of Waste at Source:

The Waste is segregated at source. Waste Bins are kept at various locations

6. Rain Water Management:

The College has yet to implement the Rain Water Management Project

- 7. Green Practices:
 - · Good Internal Road
 - Internal Tree Plantation
- 8. Assumption:
 - 1 kWh (Unit) of Electrical Energy releases 0.8 Kg of CO₂ into atmosphere



ABBREVIATIONS

LED : Light Emitting Diode

kWh : kilo-Watt Hour

MT : Metric Ton

CO₂ : 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 Practices

1.2 Table No-1: General Details of College:

No	Head	Particulars	
1	Name	Sane Guruji Shikshan Prasarak Mandal, Nasik Road, Art's and Commerce College	
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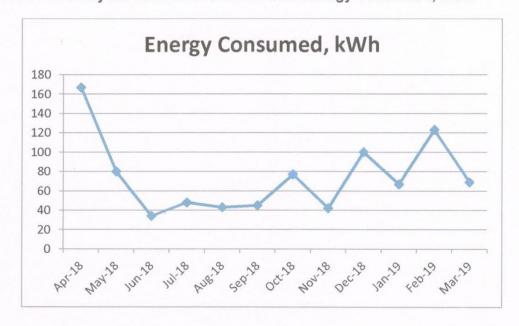
Page 8

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 Consumption Analysis- 18-19:

No	Month	Energy Consumed, kWh
1	Apr-18	167
2	May-18	80
3	Jun-18	34
4	Jul-18	48
5	Aug-18	43
6	Sep-18	45
7	Oct-18	77
8	Nov-18	42
9	Dec-18	100
10	Jan-19	67
11	Feb-19	123
12	Mar-19	69
13	Total	895
14	Maximum	167
15	Minimum	34
16	Average	74.58

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



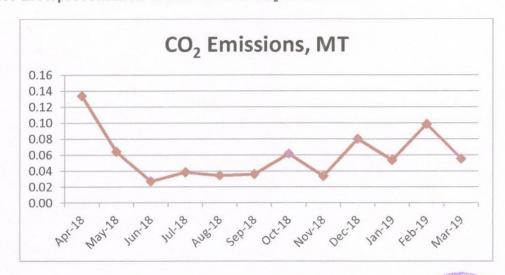
CHAPTER-III CARBON FOOT PRINTING

A Carbon Foot print is defined as the Total Greenhouse Gas emissions, emitted due to various activities. 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 0.8 Kg of CO₂ into atmosphere.

Table No 3: Month wise CO₂ Emissions:

No	Month	Energy Consumed, kWh	CO2 Emissions, MT
1	Apr-18	167	0.13
2	May-18	80	0.06
3	Jun-18	34	0.03
4	Jul-18	48	0.04
5	Aug-18	43	0.03
6	Sep-18	45	0.04
7	Oct-18	77	0.06
8	Nov-18	42	0.03
9	Dec-18	100	0.08
10	Jan-19	67	0.05
11	Feb-19	123	0.10
12	Mar-19	69	0.06
13	Total	895	0.72
14	Maximum	167	0.13
15	Minimum	34	0.03
16	Average	74.58	0.06

Chart No 2: Representation of Month wise CO₂ emissions:





CHAPTER-IV STUDY OF USAGE OF RENEWABLE ENERGY

• The College has yet to install 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 College has yet to implement the Rain Water Management Project.



CHAPTER-VII STUDY OF GREEN PRACTICES

7.1 Pedestrian Friendly Road:

The College 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 College has well maintained Tree Plantation.

Photograph of Tree Plantation:





GREEN AUDIT REPORT

of

Sane Guruji Shikshan Prasarak Mandal, Nashik Road, ART'S AND COMMERCE COLLEGE, BARAGAON PIMPRI

Taluka: Sinnar, District: Nashik 422 103



Year: 2019-20

Prepared by

ENRICH CONSULTANTS

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



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Ref: EC/ ACCS/19-20/02

Date: 12/7/2020

CERTIFICATE

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The College has adopted following Green Practices:

- Usage of Energy Efficient LED Fittings
- Segregation of Waste at source
- Provision of Septic Tank for Liquid Waste Management
- Installation of Rain Water Management Project
- 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

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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2. Energy Consumed and CO₂ Emission:

No	Parameter	Energy Consumed, kWh	CO ₂ emissions, MT
1	Total	664	0.60
2	Maximum	100	0.09
3	Minimum	1	0.00
4	Average	55.33	0.05

3. Various Measures Adopted for Energy Conservation:

- Usage of Energy Efficient LED fittings
- Maximum Usage of Day Lighting

4. Usage of Renewable Energy Source:

The College has yet to install Solar PV Plant.

5. Waste Management:

5.1 Segregation of Waste at Source:

The Waste is segregated at source. Waste Bins are kept at various locations

5.2 Liquid Waste Management:

The College has installed a Septic Tank, for Liquid Waste Management

6. Rain Water Management:

The College has yet to install Rainwater Management Project..

7. Green & Sustainable Practices:

- Good Internal Road
- Internal Tree Plantation
- Provision of Ramp for Divyangajan
- Creation of Awareness on Energy 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

LED : Light Emitting Diode

kWh : kilo-Watt Hour

MT : Metric Ton

CO₂ : 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

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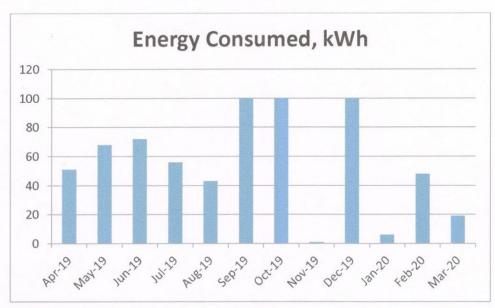


CHAPTER-II STUDY OF PRESENT ENERGY CONSUMPTION

In this chapter, we present the analysis of last year Electricity Energy Consumption Table No 2: Electrical Energy Consumption Analysis- 19-20:

No	Month	Energy Consumed, kWh
1	Apr-19	51
2	May-19	68
3	Jun-19	72
4	Jul-19	56
5	Aug-19	43
6	Sep-19	100
7	Oct-19	100
8	Nov-19	1
9	Dec-19	100
10	Jan-20	6
11	Feb-20	48
12	Mar-20	19
13	Total	664
14	Maximum	100
15	Minimum	1
16	Average	55.33

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





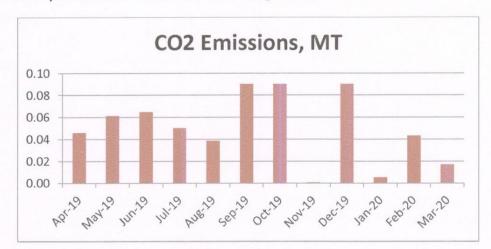
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Table No 3: Month wise CO₂ Emissions:

No	Month	Energy Consumed, kWh	CO ₂ Emissions, MT
1	Apr-19	51	0.05
2	May-19	68	0.06
3	Jun-19	72	0.06
4	Jul-19	56	0.05
5	Aug-19	43	0.04
6	Sep-19	100	0.09
7	Oct-19	100	0.09
8	Nov-19	1	0.00
9	Dec-19	100	0.09
10	Jan-20	6	0.01
11	Feb-20	48	0.04
12	Mar-20	19	0.02
13	Total	664	0.60
14	Maximum	100	0.09
15	Minimum	1	0.00
16	Average	55.33	0.05

Chart No 2: Representation of Month wise CO₂ emissions:





CHAPTER-IV STUDY OF USAGE OF RENEWABLE ENERGY

• The College has yet to install 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 Liquid Waste Management:

The College has installed a Septic Tank, for Liquid Waste Management **Photograph of Septic Tank:**





CHAPTER-VI STUDY OF RAIN WATER MANAGEMENT

The College has yet to implement the Rain Water Management Project.



CHAPTER-VII STUDY OF GREEN & SUSTAINABLE PRACTICES

7.1 Pedestrian Friendly Road:

The College 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 College has well maintained Tree Plantation.

Photograph of Tree Plantation:





7.3 Provision of Ramp for Divyangajan:

The College has made provision of Ramp for the Divyangajan.

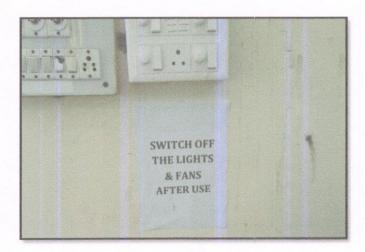
Photograph of Ramp for Divyangajan:



7.4 Creation of Awareness by Display of Posters:

The College has displayed posters on Energy Conservation.

Photograph of Poster Display Board on Energy Conservation:



GREEN AUDIT REPORT

of

Sane Guruji Shikshan Prasarak Mandal, Nashik Road, ART'S AND COMMERCE COLLEGE, BARAGAON PIMPRI

Taluka: Sinnar, District: Nashik 422 103



Year: 2020-21

Prepared by

ENRICH CONSULTANTS

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



MAHARASHTRA ENERGY DEVELOPMENT AGENCY

An ISO 9001 : 2000 Reg. no. : RQ 91 / 2462



Maharashtra Energy Development Agency

(Government of Maharashtra Institution)

Aundh Road, Opposite Spicer College Road, Near Commissionerate of Animal Husbandary,

Aundh, Punc, Maharashtra 411067

Ph No: 020-35000450

Email: eee@mahaurja.com, Web: www.mahaurja.com

ECN/2021-22/CR-14/1577

22nd April, 2021

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 Enrich Consultants

Yashashree, Plot No. 26, Nirmal Bag Society, Near Muktangan English School, Parvati,

Pune - 411009.

Registration Category : Empanelled Consultant for Energy Conservation

Programme for Class 'A'

Registration Number : MEDA/ECN/2021-22/Class A/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 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 21st April, 2023 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)



Enrich Consultants

Yashashree, 26, Nirmal Bag Society, Near Muktangan English School, Parvati, Pune 411 009 Tel: 09890444795 Email: enrichcons@gmail.com

Ref: EC/ ACCS/20-21/02

Date: 18/7/2021

CERTIFICATE

This is to certify that we have conducted Green Audit at Sane Guruji Shikshan Prasarak Mandal, Nashik Road, Art's and Commerce College, Baragaon Pimpri, Tal: Sinnar, District: Nashik in the year 2020-21.

The College has adopted following Green Practices:

- Usage of Energy Efficient LED Fittings
- Segregation of Waste at source
- > Provision of Septic Tank for Waste Liquid Disposal
- > Installation of Rain Water Management Project
- Maintenance of Good Internal Road
- > Tree Plantation in the campus
- Provision of Ramp for Divyangajan
- Creation of awareness on Water 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 Enrich Consultants,

A Y Mehendale,

BE- Mechanical, M Tech- Energy, Certified Energy Auditor: EA-8192 ONSULTANTO *

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7	Study of Green & Sustainable Practices	15



ACKNOWLEDGEMENT

We Enrich Consultants, Pune, express our sincere gratitude to the management of Sane Guruji Shikshan Prasarak Mandal, Nashik Road, Art's and Commerce College, Baragaon Pimpri, Taluka: Sinnar, District: Nasik, for awarding us the assignment of Green Audit of their College Campus for the Year: 20-21.

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



EXECUTIVE SUMMARY

1. Sane Guruji Shikshan Prasarak Mandal, Nashik Road, Art's and Commerce College, Baragaon Pimpri, Taluka: Sinnar, District: Nashik 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	1209	1.09
2	Maximum	231	0.21
3	Minimum	56	0.05
4	Average	100.75	0.09

3. Various Measures Adopted for Energy Conservation:

- Usage of Energy Efficient LED fittings
- Maximum Usage of Day Lighting

4. Usage of Renewable Energy Source:

• The College has yet to install Solar PV Plant.

5. Waste Management:

5.1 Segregation of Waste at Source:

The Waste is segregated at source.

5.2 Organic Waste Management:

The College has installed bio composting plant, for disposal of Organic Waste.

5.3 Liquid Waste Management:

The College has installed a Septic Tank and is cleaned periodically.

6. Rain Water Management:

The rain water falling on the ground is channelized in a soak pit, 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 Water Conservation by Display of Posters

Page 6

Green Audit Report: Art's and Commerce College, Baragaon Pimpri, Sinnar: 20-21

8. Assumption:

1 kWh (Unit) of Electrical Energy releases 0.9 Kg of CO₂ into atmosphere

9. Reference:

• For CO₂ calculations: <u>www.tatapower.com</u>



ABBREVIATIONS

LED : Light Emitting Diode

kWh : kilo-Watt Hour

MT : Metric Ton

CO₂ : 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 College:

No	Head	Particulars	
1	Name	Sane Guruji Shikshan Prasarak Mandal, Nasik Road, Art's and Commerce College	
2	Address	Baragaon Pimpri, Taluka: Sinnar, District: Nashik 422 103	
3	Affiliation	Savitribai Phule Pune University	

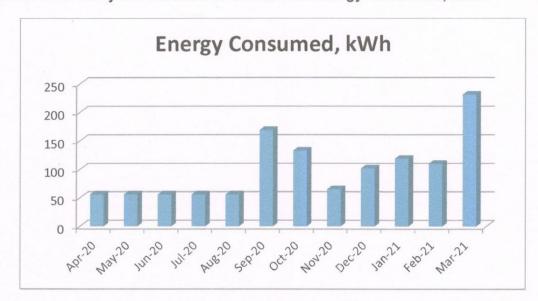


CHAPTER-II STUDY OF PRESENT ENERGY CONSUMPTION

In this chapter, we present the analysis of last year Electricity Energy Consumption Table No 2: Electrical Energy Consumption Analysis - 20-21:

No	Month	Energy Consumed, kWh
1	Apr-20	56
2	May-20	56
3	Jun-20	56
4	Jul-20	56
5	Aug-20	56
6	Sep-20	169
7	Oct-20	133
8	Nov-20	65
9	Dec-20	102
10	Jan-21	119
11	Feb-21	110
12	Mar-21	231
13	Total	1209
14	Maximum	231
15	Minimum	56
16	Average	100.75

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





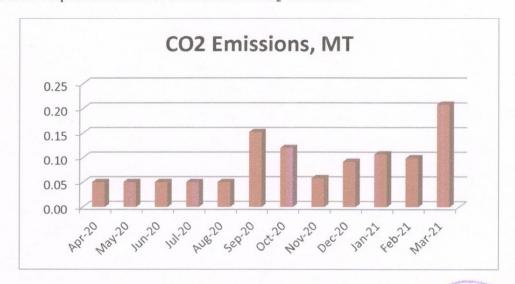
CHAPTER-III CARBON FOOT PRINTING

A Carbon Foot print is defined as the Total Greenhouse Gas emissions, emitted due to various activities. The basis of Calculation for CO_2 emissions due to Electrical Energy are: 1 Unit (kWh) of Electrical Energy releases 0.9 Kg of CO_2 into atmosphere.

Table No 3: Month wise CO₂ Emissions:

No	Month	Energy Consumed, kWh	CO2 Emissions, MT
1	Apr-20	56	0.05
2	May-20	56	0.05
3	Jun-20	56	0.05
4	Jul-20	56	0.05
5	Aug-20	56	0.05
6	Sep-20	169	0.15
7	Oct-20	133	0.12
8	Nov-20	65	0.06
9	Dec-20	102	0.09
10	Jan-21	119	0.11
11	Feb-21	110	0.10
12	Mar-21	231	0.21
13	Total	1209	1.09
14	Maximum	231	0.21
15	Minimum	56	0.05
16	Average	100.75	0.09

Chart No 2: Representation of Month wise CO₂ emissions:





CHAPTER-IV STUDY OF USAGE OF RENEWABLE ENERGY

The College has yet to install 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 Organic Waste Management:

The College has constructed a Bio composting Unit, for conversion of bio-degradable waste Photograph of Bio Composting Arrangement:



5.3 Liquid Waste Management: The College has installed a Septic Tank and is cleaned periodically. **Photograph of Septic Tank:**





CHAPTER-VI STUDY OF RAIN WATER MANAGEMENT

The Rain water falling on the ground is channelized and is stored in a soak pit, in order to increase the underground water table.

Photograph of Rain Water Carrying Channel Section & Storage Pit:





CHAPTER-VII STUDY OF GREEN & SUSTAINABLE PRACTICES

7.1 Pedestrian Friendly Road:

The College 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 College has well maintained Tree Plantation.

Photograph of Tree Plantation:





7.3 Provision of Ramp for Divyangajan:

The College has made provision of Ramp for the Divyangajan.

Photograph of Ramp for Divyangajan:



7.4 Creation of Awareness by Display of Posters:The College has displayed posters on Water Conservation.Photograph of Poster Display Board on Water Conservation:



GREEN AUDIT REPORT

Sane Guruji Shikshan Prasarak Mandal, Nashik Road, ART'S AND COMMERCE COLLEGE, BARAGAON PIMPRI

Taluka: Sinnar, District: Nashik 422 103



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@mahaurja.com, Web: www.mahaurja.com

ECN/2022-23/CR-43/1709

10th May, 2022

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 Muktangan 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.
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- The Director General, MEDA reserves the right to cancel the registration at any time without assigning any reasons thereof.

General Manager (EC)



ENGRESS SERVICES

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

Ref: ES/ ACCS/21-22/02

Date: 21/6/2022

CERTIFICATE

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The College has adopted following Green & Sustainable Practices:

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- Segregation of Waste at source
- Provision of Septic Tank for Liquid Waste Management
- > 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 Plastic Free Campus 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,

Amehendele

A Y Mehendale,

Certified Energy Auditor, EA-8192

ASSOCHAM GEM Certified Professional: GEM: 22/788

ORESS SUBVICTOR

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2. Energy Consumed and CO₂ Emission:

No	Parameter	Energy Consumed, kWh	CO ₂ emissions, MT
1	Total	2293	2.06
2	Maximum	456	0.41
3	Minimum	110	0.10
4	Average	191.08	0.17

3. Various Measures Adopted for Energy Conservation:

- Usage of Energy Efficient LED fittings
- Maximum Usage of Day Lighting

4. Usage of Renewable Energy Source:

• The College has yet to install Solar PV Plant.

5. Waste Management:

5.1 Segregation of Waste at Source:

The Waste is segregated at source. Waste bins are kept at various points.

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Am GRESS

Green Audit Report: Art's and Commerce College, Baragaon Pimpri, Sinnar: 21-22

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1.3 Google Earth Image:



College

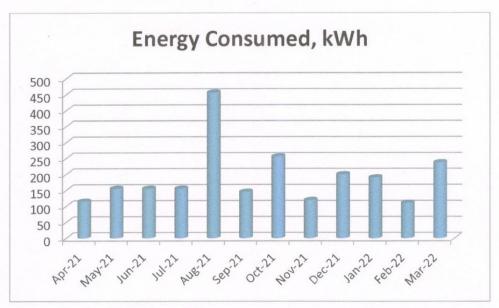


CHAPTER-II STUDY OF PRESENT ENERGY CONSUMPTION

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	115
2	May-21	155
3	Jun-21	155
4	Jul-21	155
5	Aug-21	456
6	Sep-21	145
7	Oct-21	256
8	Nov-21	119
9	Dec-21	200
10	Jan-22	190
11	Feb-22	110
12	Mar-22	237
13	Total	2293
14	Maximum	456
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16	Average	191.08

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





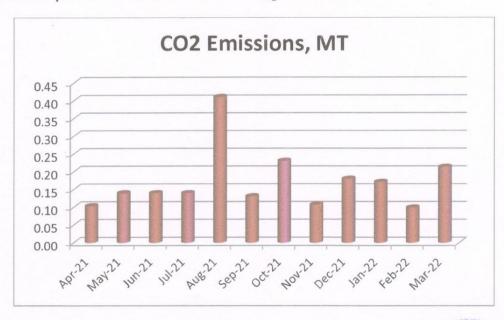
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2	May-21	155	0.14
3	Jun-21	155	0.14
4	Jul-21	155	0.14
5	Aug-21	456	0.41
6	Sep-21	145	0.13
7	Oct-21	256	0.23
8	Nov-21	119	0.11
9	Dec-21	200	0.18
10	Jan-22	190	0.17
11	Feb-22	110	0.10
12	Mar-22	237	0.21
13	Total	2293	2.06
14	Maximum	456	0.41
15	Minimum	110	0.10
16	Average	191.08	0.17

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The College has well maintained pedestrian road as to facilitate the easy movement of the students within the campus.

Photograph of Road within campus:



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Photograph of Tree Plantation:





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The College has made provision of Ramp for the Divyangajan.

Photograph of Ramp for Divyangajan:



7.4 Creation of Awareness by Display of Posters:

The College has displayed posters on Plastic Free Campus.

Photograph of Poster Display Board on Plastic Free Campus:



ANNEXURE LIST OF TREES & PLANTS IN THE CAMPUS

No	Name of Tree	Quantity
1	Guava	6
2	Mango	25
3	Tamarind	18
4	Bamboo	2
5	Annona Squamosa	12
6	Cluster Fig	2
7	Bahunia Racemosa	3
8	Goosebery	1
9	Azadirachta Indica	63
10	Teak	13
11	Banyan	4
12	Saraca Asoca	22
13	Fanpalm	10
14	Curryleaves	1
15	Black Plum	4
16	Blackboard Tree	2
17	Pithecellobium	1
18	Rose	1
19	Frangipani	5
20	Silver oak	2
21	Burflower	1
22	Royal Poinciana	6
23	JuJube	2
24	Cherry	2
	Total	208