

GREEN AUDIT REPORT
of
RAHUL COLLEGE OF EDUCATION

Navghar Raod, Bhayander (East), Thane 401 105



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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PRINCIPAL

Rahul College of Education
Mira Road (East), Thane - 40110

REGISTRATION CERTIFICATES

Regn. No. EA-8192 No. 2842


National Productivity Council
(National Certifying Agency)

PROVISIONAL CERTIFICATE

This is to certify that Mr. / Ms. Achyut Yashavant Mehendale
son / daughter of Mr. Yashavant
has passed the National Certification Examination for Energy Auditors in April - 2007, conducted on behalf of the Bureau of Energy Efficiency, Ministry of Power, Government of India

He / She is qualified as Certified Energy Manager as well as Certified Energy Auditor.
He / She shall be entitled to practice as Energy Auditor under the Energy Conservation Act 2001, subject to the fulfillment of qualifications for the Accredited Energy Auditor and issue of certificate of Accreditation by the Bureau of Energy Efficiency under the said Act.

This certificate is valid till the issuance of an official certificate by the Bureau of Energy Efficiency.

Place : Chennai, India 
Controller of Examination

Date : 10th August 2007

BEE AUDITOR CERTIFICATE

MAHARASHTRA ENERGY DEVELOPMENT AGENCY

Maharashtra Energy Development Agency
(A Government of Maharashtra undertaking)
2nd Floor, MIIADA Commercial Complex, Opp. Tridal Nagar, Yerwada, Pune 411 006,
Ph No: 020-26614393/266144403
Email: ee@maharja.com, Web: www.maharja.com

ECN/2018-19/CR-05/4174 19th September, 2018

**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 : **Enrich Consultants**
Yashashree, Plot No. 26, Nirmal Bag Society,
Near Muktaangan English School,
Parvati, Pune - 411009

Registration Category : **Empanelled Consultant for Energy Conservation Programme**

Registration Number : **MEDA/ECN/CR-05/2018-19/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 the firm at any time without giving any prior information and cancelling the registration, if the information is found incorrect.
- This empanelment is valid till **31st March 2021** 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.


(Sruthi Kudarikar)
General Manager (FC)

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MEDA EMPANELMENT CERTIFICATE



ENRICH CONSULTANTS

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

Ref: EC/RCOE/19-20/02

Date: 18/7/2020

CERTIFICATE

This is to certify that we have conducted Green Audit at Rahul College of Education, Bhayander (East) Thane 401 105, in the Academic year 2019-20.

The College has adopted following Green Practices:

- Usage of Energy Efficient LED Light Fitting
- Maximum Usage of Day Lighting
- Segregation of Waste at source
- Implementation of Rain Water Management Project
- Good internal Road

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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ACKNOWLEDGEMENT

We Enrich Consultants, Pune, express our sincere gratitude to the management of Rahul College of Education, Bhayander (East) Thane 401 105, for awarding us the assignment of Green Audit of their Campus for the Year: 2019-20.

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

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EXECUTIVE SUMMARY

1. **Rahul College of Education, Bhayander**, consumes Energy in the form of **Electrical Energy**; used for various Electrical Equipment.

2. Present Energy Consumption & CO₂ Emission:

No	Parameter/ Value	Energy Consumed, kWh	CO ₂ Emissions, MT
1	Total	22480	20.23
2	Maximum	2698	2.43
3	Minimum	878	0.79
4	Average	1873.33	1.69

3. Usage of Renewable Energy:

- The College has yet to install Roof Top Solar PV Plant.

4. Waste Management:

4.1 Segregation of Waste at Source:

The Dry and Wet waste is segregated at the source. Waste collection Bins are kept at various points.

5. Rain Water Management:

The Rain water falling on terrace is used to increase the Underground Water Table.

6. Green Practices:

- Good internal road for easy movement of commuters
- Provision of Lift for Divyangajan

7. Assumption:

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

8. Reference:

- For CO₂ Emission Computation: www.tatapower.com

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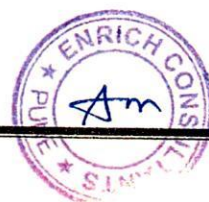
ABBREVIATIONS

Kg	:	Kilo Gram
MT	:	Metric Ton
kWh	:	kilo-Watt Hour
LPD	:	Liters per Day
LED	:	Light Emitting Diode

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CHAPTER-I INTRODUCTION

1.1 Objectives:

1. To study present Energy Consumption
2. To compute CO₂ emissions
3. To Study Usage of Renewable Energy
4. To Study Waste Management Practices
5. To Study Rain Water Management
6. To Study Green & Sustainable Initiatives

1.2 Table No 1: General Details of College:

No	Head	Particulars
1	Name of College	Rahul College of Education
2	Address	Navghar Road, Bhayander (East) Thane 401 105
3	Affiliation	University of Mumbai

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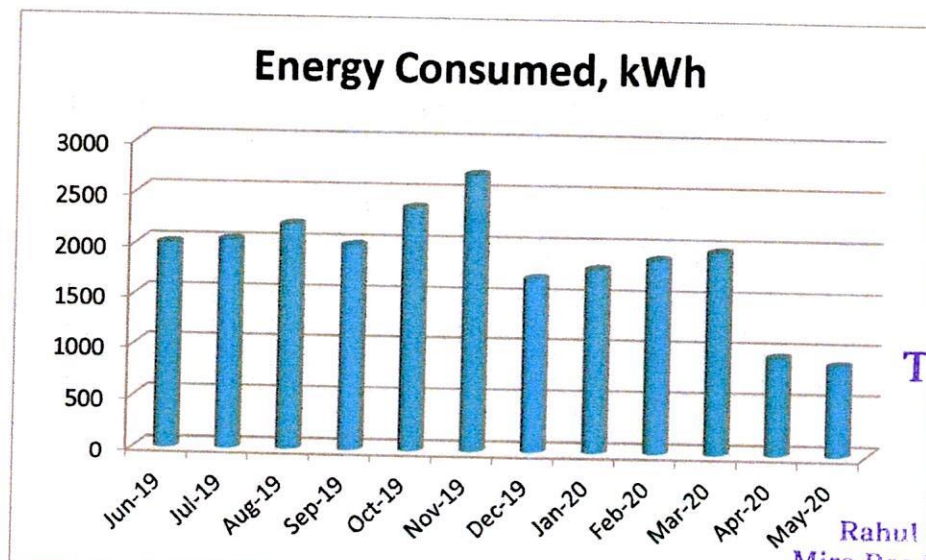
CHAPTER-II STUDY OF PRESENT ENERGY CONSUMPTION

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

Table No 2: Electrical Energy Consumption Analysis: 2019-20:

No	Month	Energy Consumed, kWh
1	Jun-19	1998
2	Jul-19	2036
3	Aug-19	2189
4	Sep-19	1996
5	Oct-19	2369
6	Nov-19	2698
7	Dec-19	1697
8	Jan-20	1797
9	Feb-20	1895
10	Mar-20	1978
11	Apr-20	949
12	May-20	878
13	Total	22480
14	Maximum	2698
15	Minimum	878
16	Average	1873.33

Chart No 1: To study the variation of Monthly Energy Consumption, kWh:



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CHAPTER III STUDY OF CARBON FOOT PRINTING

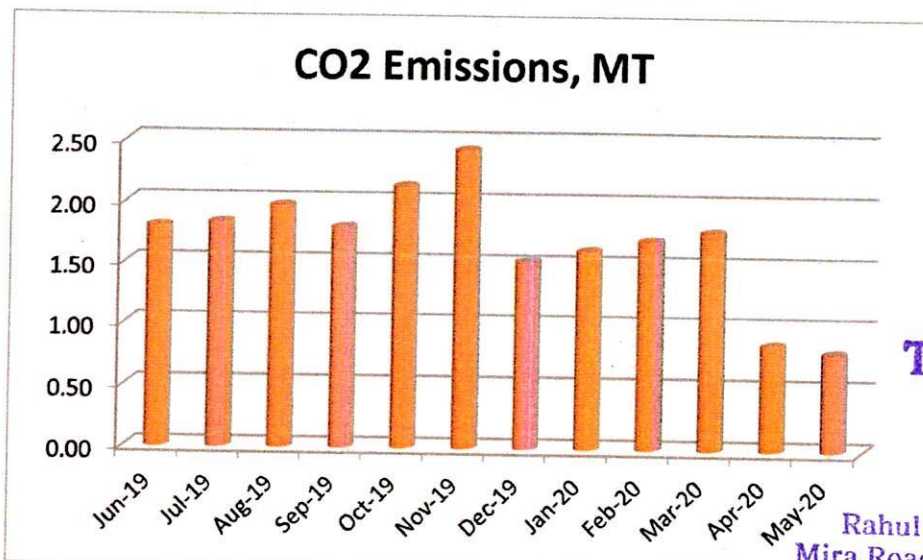
A Carbon Foot print is defined as the Total Greenhouse Gas emissions, emitted due to various activities. Basis for computation of CO₂ Emissions:

- 1 kWh of Electrical Energy releases 0.9 Kg of CO₂ into atmosphere

Table No 3: Month wise CO₂ Emissions:

No	Month	Energy Consumed, kWh	CO ₂ Emissions, MT
1	Jun-19	1998	1.80
2	Jul-19	2036	1.83
3	Aug-19	2189	1.97
4	Sep-19	1996	1.80
5	Oct-19	2369	2.13
6	Nov-19	2698	2.43
7	Dec-19	1697	1.53
8	Jan-20	1797	1.62
9	Feb-20	1895	1.71
10	Mar-20	1978	1.78
11	Apr-20	949	0.85
12	May-20	878	0.79
13	Total	22480	20.23
14	Maximum	2698	2.43
15	Minimum	878	0.79
16	Average	1873.33	1.69

Chart No 2: Representation of Month wise CO₂ Emissions:

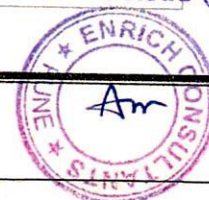


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CHAPTER IV
STUDY OF USAGE OF RENEWABLE ENERGY

The College has yet to install Roof Top Solar PV Plant.

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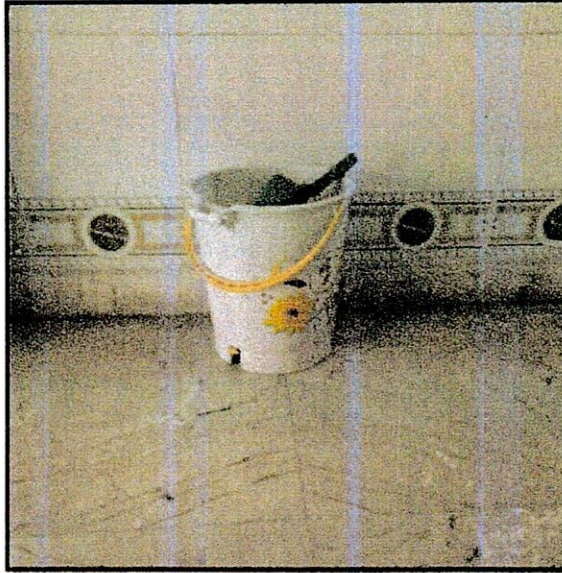


CHAPTER V STUDY OF WASTE MANAGEMENT

5.1 Segregation of Waste at Source:

The Dry and Wet waste is segregated at the source. Waste collection Bins are kept at various points.

Photograph of Waste Collection Bin:



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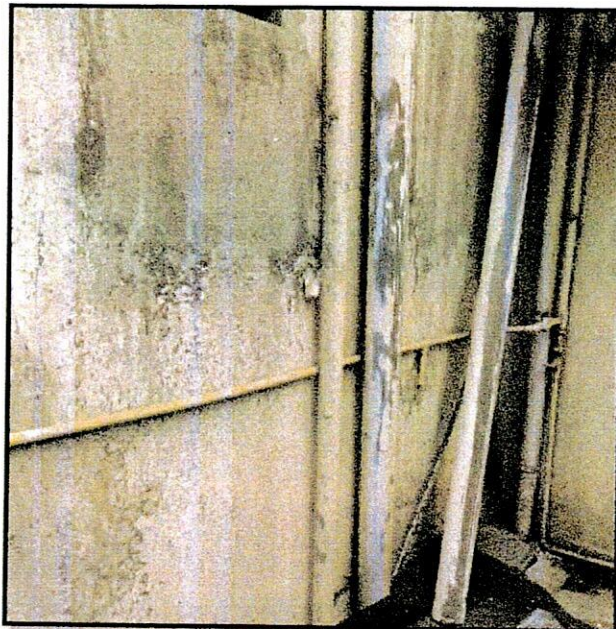
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CHAPTER-VI

STUDY OF RAIN WATER MANAGEMENT

The Rain water falling on terrace is used to increase the Underground Water Table.

Photograph of Rain Water Collecting Pipe:



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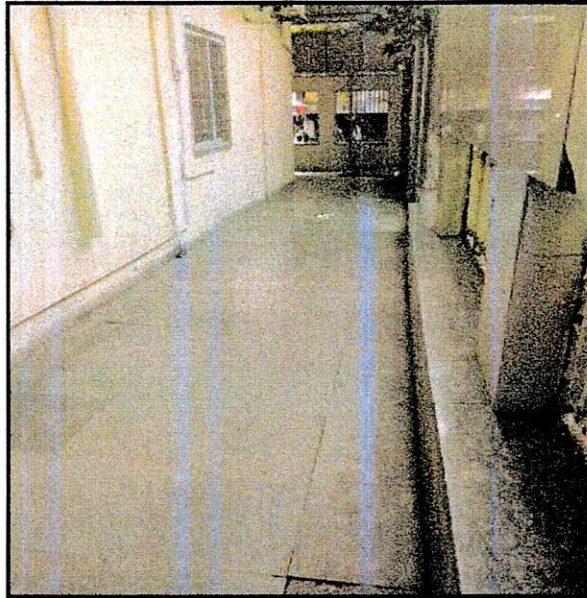
CHAPTER-VII

STUDY OF GREEN PRACTICES

7.1 Pedestrian Friendly Road:

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

Photograph of Internal Road inside the College Campus:



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