

GREEN AUDIT REPORT

of

Janata Shikshan Prasarak Mandal's

PHULSING NAIK MAHAVIDYALAYA

PUSAD - 445 216



Year: 2022-23

Prepared by:

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ISO: 9001-2015 Certified (Cert No: 23EQKC13),

ISO: 14001-2015 Certified (Cert No: 23EEKW20)

GREEN AUDIT CERTIFICATE

Certificate No: ES/PNM/22-23/02

Date: 18/05/2023

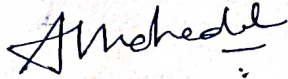
This is to certify that we have conducted Green Audit at Phulsing Naik Mahavidyalaya, Pusad, in the Year 2022-23.

The Institute has adopted following Energy Efficient & Green Practices:

- Usage of Energy Efficient LED Light Fitting
- Segregation of Waste at Source
- Installation of Bio Composting Pit
- College has installed septic tanks and it cleans periodically
- Installation of Rain Water Management Project
- Maintenance of good Internal Road
- Tree Plantation in the campus
- Provision of Ramp for Divyangajan
- Creation of awareness by display of Posters on Resource Conservation

We appreciate the support of Management, involvement of faculty members and students in the process of Energy Conservation & making the campus Green.

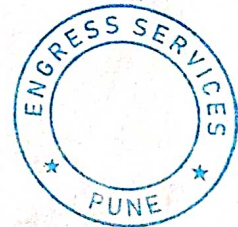
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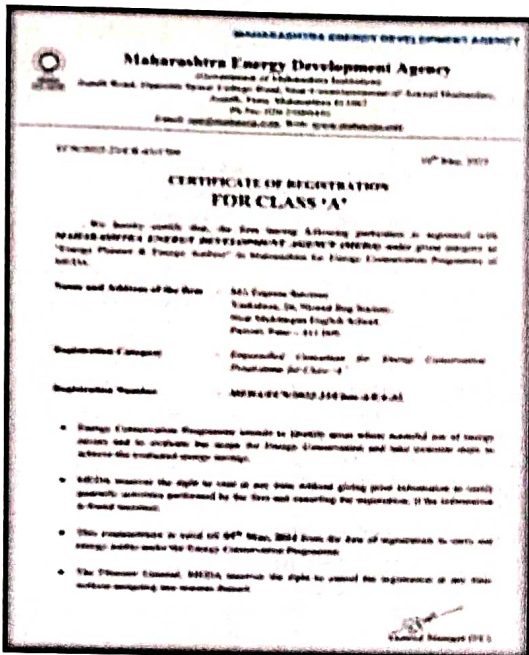
A Y Mehendale,

B E- Mech, M Tech-Energy, Certified Energy Auditor, EA-8192

ASSOCHAM GEM Certified Professional: GEM: 22/788



REGISTRATION CERTIFICATES



MEDA Registration Certificate



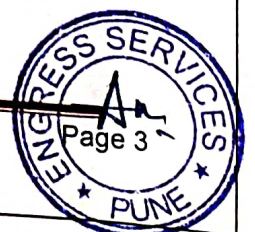
GEM Certified Professional Certificate



ISO: 9001-2015 Certificate



ISO: 14001-2015 Certificate



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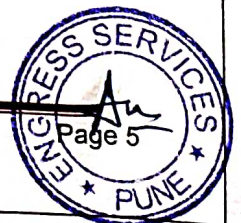
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ACKNOWLEDGEMENT

We Engress Services, Pune, express our sincere gratitude to the management of Phulsing Naik Mahavidyalaya, Pusad for awarding us the assignment of Green Audit of their Campus for the Year: 2022-23.

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



EXECUTIVE SUMMARY

1. Phulsing Naik Mahavidyalaya, Pusad 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 Consumption	26807	kWh
2	Annual CO ₂ Emissions	24.12	MT

3. Renewable Energy & Energy Efficiency Projects:

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

4. Waste Management:

4.1 Segregation of Waste at Source:

The Waste is segregated at source in separate Waste Bins & is handed over for further action.

4.2 Bio Composting & Vermi Composting Pit:

The Institute has a Bio Composting Composting Pit, to convert the Leafy Waste into Bio Compost.

4.4 Liquid Waste Management:

The Institute has installed Septic Tank and it cleans periodically.

4.5 Sanitary Waste Management:

The Institute has installed Sanitary Waste Incinerator, for disposal of the Sanitary Waste.

4.6 E Waste Management:

It is recommended to dispose of the E Waste through Authorized Agency.

5. Rain Water Management:

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

6. Green & Sustainable Practices:

- Maintenance of good Internal Road
- Maintenance of Internal Garden: 500 plus Trees in the campus.
- Provision of Ramp for Divyangajan
- Creation of awareness on Resource Conservation Display of Posters

8. Assumption:

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

9. 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

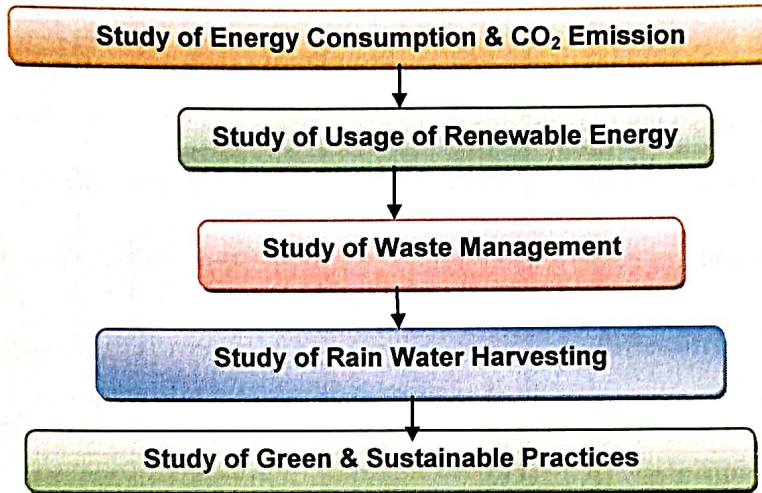


CHAPTER-I INTRODUCTION

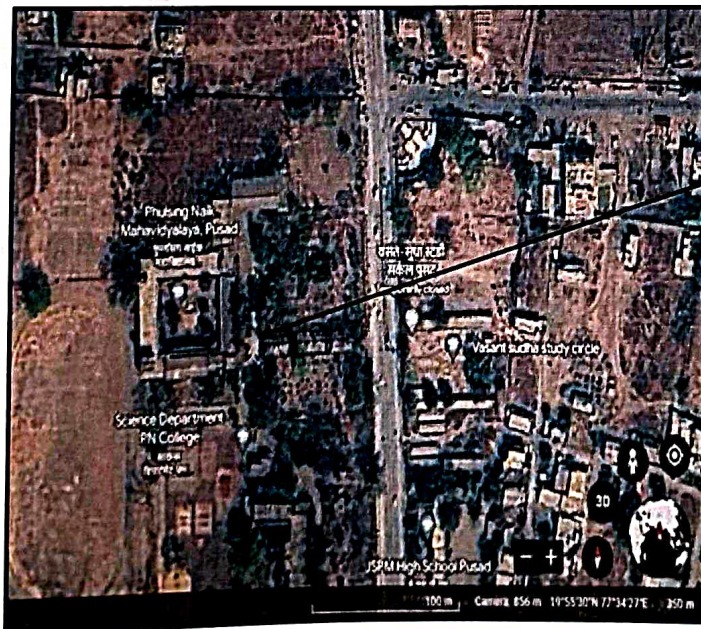
1.1 Introduction:

A Green Audit is conducted at Phulsing Naik Mahavidyalaya, Pusad.

1.2 Audit Procedural Steps:



1.3 Institute Location Image:



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. In this we compute the emissions of Carbon-Di-Oxide, by usage of the various forms of Energy used by the Institute for performing its day to day activities

The Institute uses Electrical Energy for various Electrical gadgets.

Basis for computation of CO₂ Emissions:

The basis of Calculation for CO₂ emissions due to Electrical Energy is as under

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

Based on the above Data we compute the CO₂ emissions which are being released in to the atmosphere by the Institute due to its Day to Day operations

Table No 1: Month wise CO₂ Emissions:

No	Month	Energy Consumption	CO ₂ Emissions, MT
1	Apr-22	2201	1.980
2	May-22	2294	2.064
3	Jun-22	1985	1.7865
4	Jul-22	2600	2.34
5	Aug-22	2919	2.627
6	Sep-22	2930	2.637
7	Oct-22	1860	1.674
8	Nov-22	2390	2.151
9	Dec-22	2121	1.908
10	Jan-23	1736	1.562
11	Feb-23	2159	1.943
12	Mar-23	1612	1.450
13	Total	26807	24.126
14	Maximum	2930	2.637
15	Minimum	1612	1.450
16	Average	2233.92	2.010

Chart No 1: Month wise CO₂ Emissions:

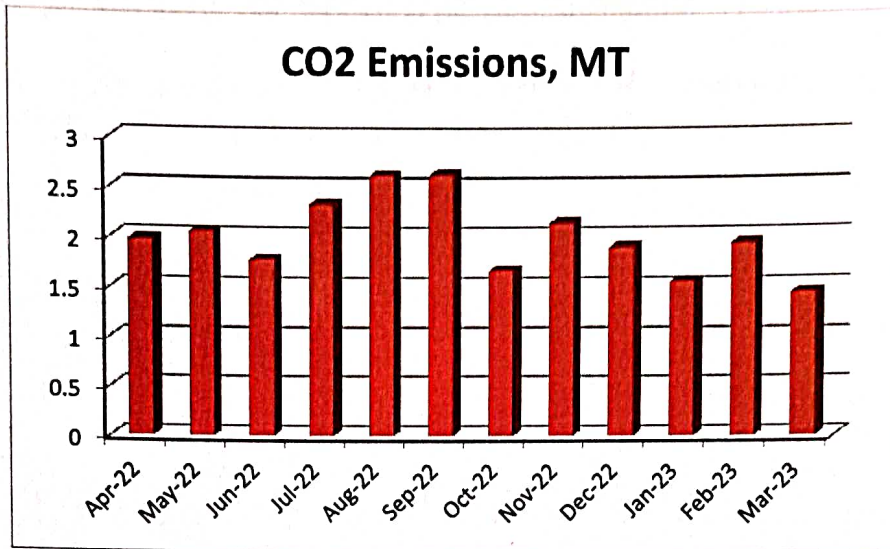


Table No 2: Important Parameters:

No	Parameter/ Value	Energy Consumption (kWh)	CO2 Emissions MT
1	Total	26807	24.126
2	Maximum	2930	2.637
3	Minimum	1612	1.450
4	Average	2233.92	2.010

CHAPTER III

STUDY OF USAGE OF RENEWABLE ENERGY

The Institute has not installed Roof Top Solar PV Plant. It is recommended to install Roof Top Solar PV Plant.



CHAPTER IV STUDY OF WASTE MANAGEMENT

4.1 Segregation of Waste at Source:

The Waste is segregated at source in separate Waste Bins & is handed over for further action.

Photograph of Waste Collection Bin:



4.2 Bio Composting Pit:

The Institute has installed a Bio Composting Pit, to convert the Leafy Waste into Bio Compost.

Photograph of Bio Composting Pit:



4.4 Liquid Waste Management:

The Institute has installed Septic Tanks it cleans periodically.

4.5 Sanitary Waste Management:

The Institute has installed Sanitary Waste Incinerator for disposal of the Sanitary Waste.



4.6 E Waste Management:

It is recommended to dispose of the E Waste through Authorized Agency.

CHAPTER V STUDY OF RAIN WATER MANAGEMENT

The Institute has implemented the Rain Water Management Project. The Institute 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 Pipes & Recharge Section:



CHAPTER VI STUDY OF GREEN & SUSTAINABLE PRACTICES

6.1 Pedestrian Friendly Road & Internal Tree Plantation:

The Institute has well maintained internal road to facilitate the easy movement of the students within the campus. The Institute has well maintained landscaped garden in the campus.

Photograph of Internal Road & Tree plantation:



6.2 Provision of Ramp for Divyangajan:

For easy movement of Divyangajan, the Institute has made provision of Ramp.

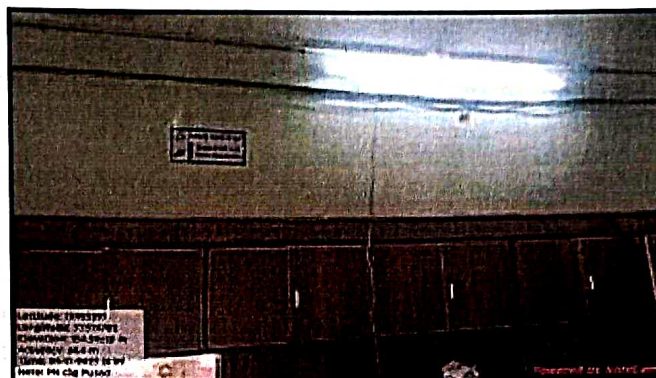
Photograph of Ramp:



6.3 Creation of Awareness about Energy Conservation:

The Institute has displayed posters emphasizing on importance of Energy Conservation.

Photograph of Poster on Energy Conservation:



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

No	Name of Trees	Number of Trees
1	Phyllanthus emblica	05
2	Crossandra infundibuliformis	02
3	Justicia adhatoda	04
4	Mangifera indica	10
5	Ficus carica	01
6	Saraca asoca	154
7	Vachellia nilotica	21
8	Prunus dulcis	02
9	Phyllanthus emblica	83
10	Mimusops elengi	83
11	Ziziphus mauritiana	47
12	Bougainvillea	45
13	Plumeria rubra	15
14	Manilkara zapota	09
15	Tamarindus indica	05
16	Christmas pine	04
17	Cupressis	01
18	Cycas	03
19	Punica granatum	02
20	Pithecellobium dulce	03
21	Bignoniaceae	10
22	Murraya koenigii	16
23	Delonix regia	23
24	Tabernaemontana divaricata	02
25	Ixora	46
26	Jasminum	02
27	Syzygium cumini	05
28	Hibiscus rosa-sinensis	03
29	Peltophorum pterocarpum	92
30	Azadirachta indica	187
31	Millettia pinnata	09
32	Canna indica	03
33	Carissa carandas	02
34	Limonia acidissima	01
35	Aloevera	01
36	Cannabis sativa	39
37	Mimosa pudica	01
38	Lavandula	02
39	Lilium	149
40	Citrus limon	05
41	Rangoon Creeper	04

42	Jasmine	630
43	Cyperus rotundus.	
44	Cocos nucifera	06
45	eucalyptus	96
46	Butea monosperma	12
47	Ficus religiosa	11
48	Psidium Guajava	05
49	Artocarpus heterophyllus	01
50	Pterocarpus santalinus	01
51	Oak	02
52	Tectona grandis	797
53	Alstonia scholaris	104
54	Asparagus racemosus	42
55	Dalbergia sissoo	02
56	Moringa oleifera	10
57	Phoenix sylvestris	03
58	Annona cherimola	18
59	Leucaena leucocephala	29
60	Ficus racemosa	25
61	Ocimum sanctum	11
62	Bambusa vulgaris	104
63	Thuja occidentalis	13
64	Ficus benghalensis	10